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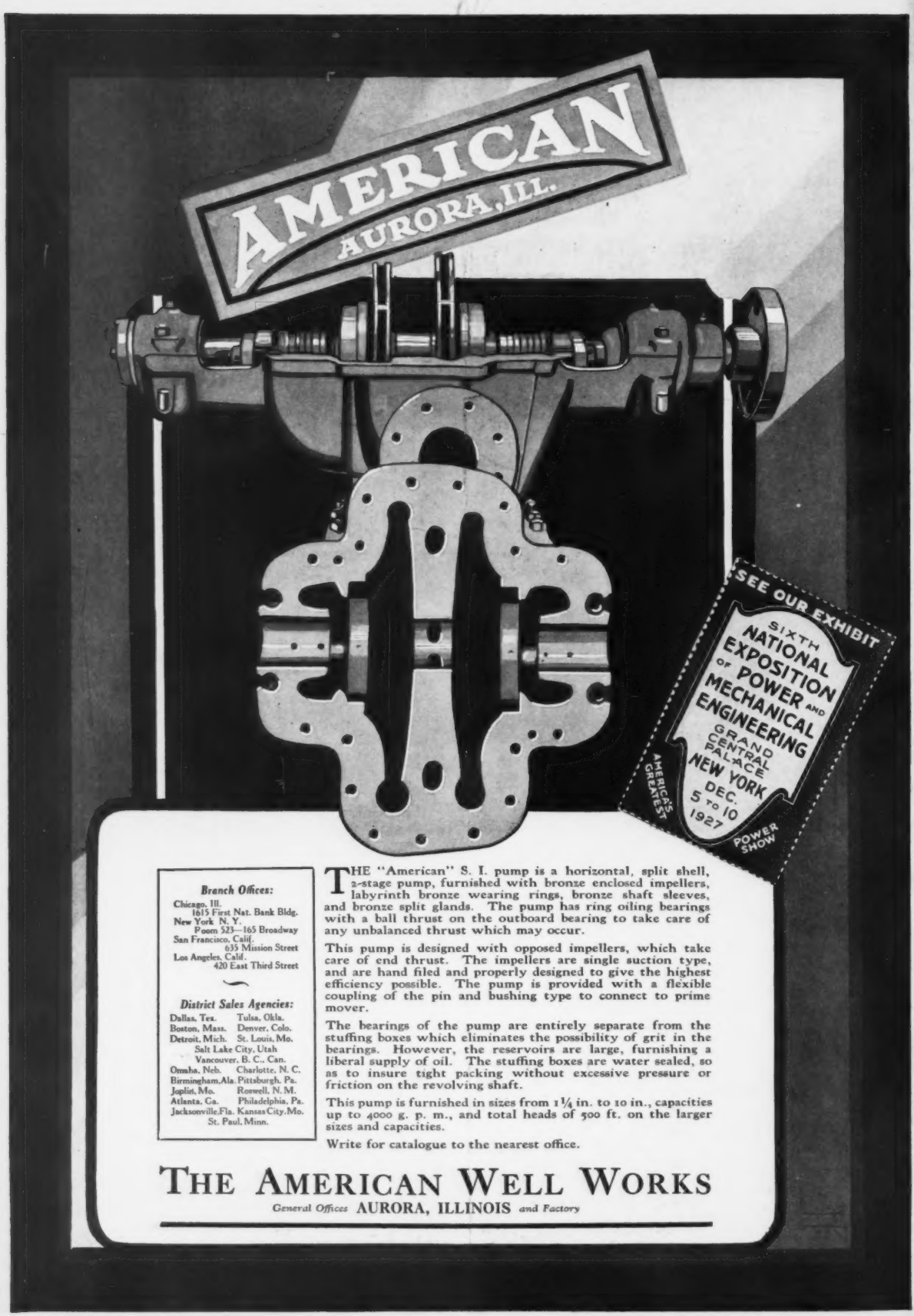

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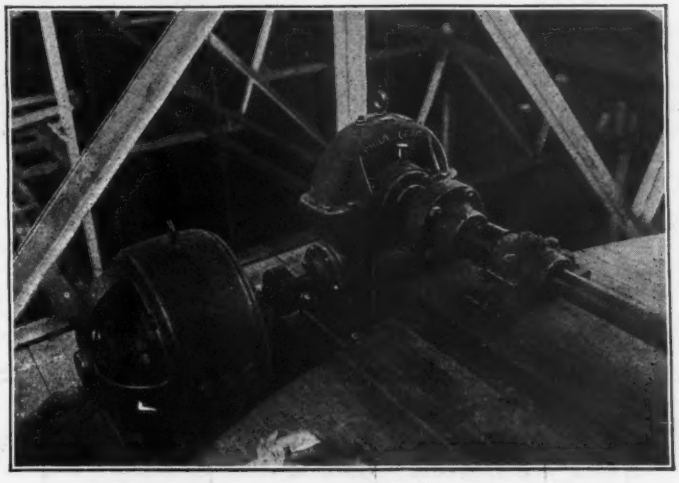

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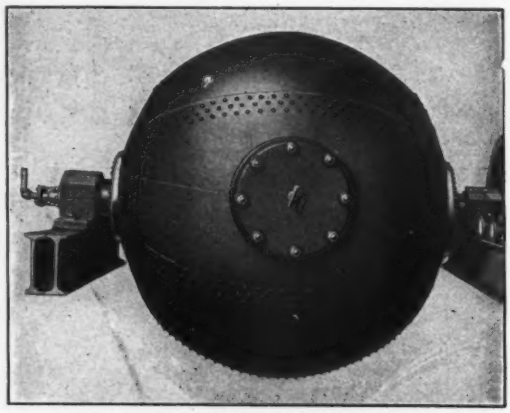

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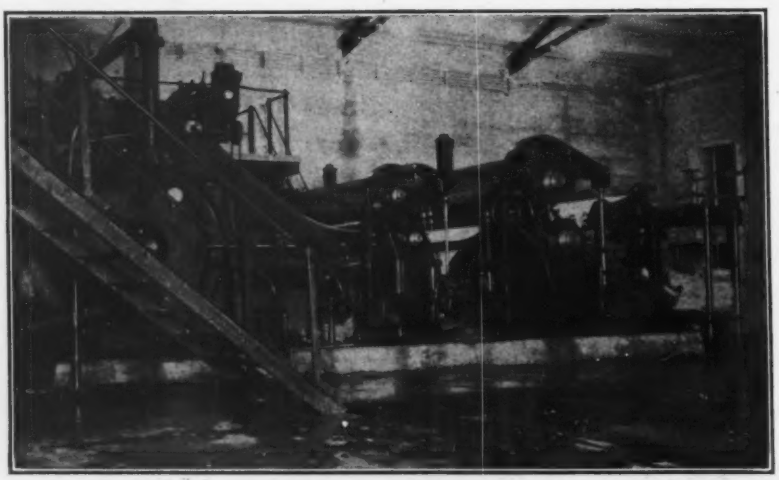

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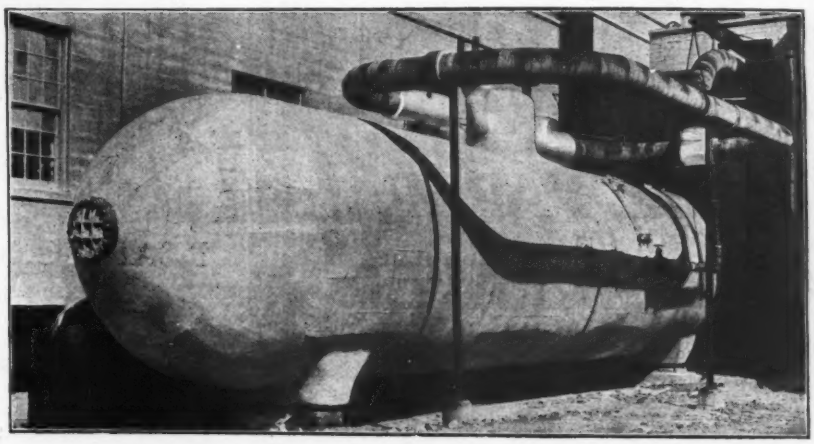

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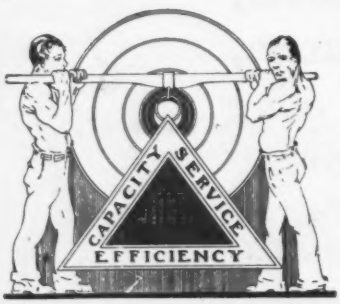

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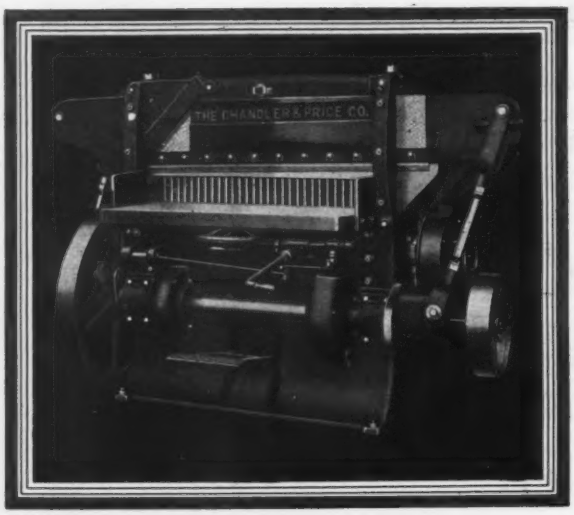

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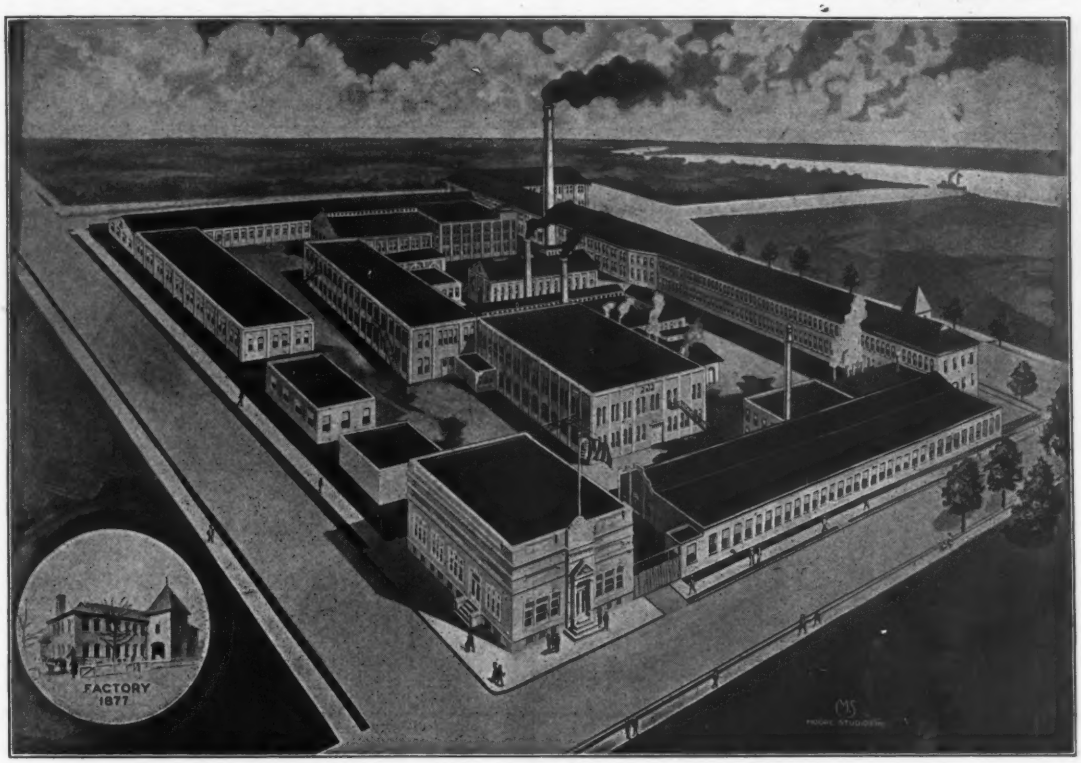

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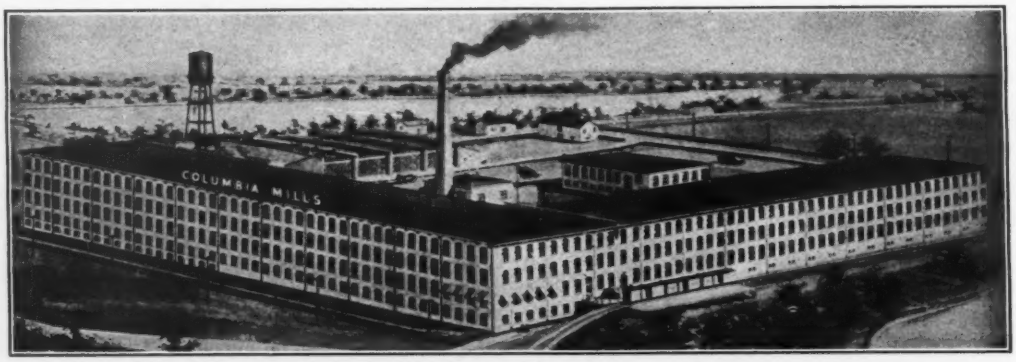

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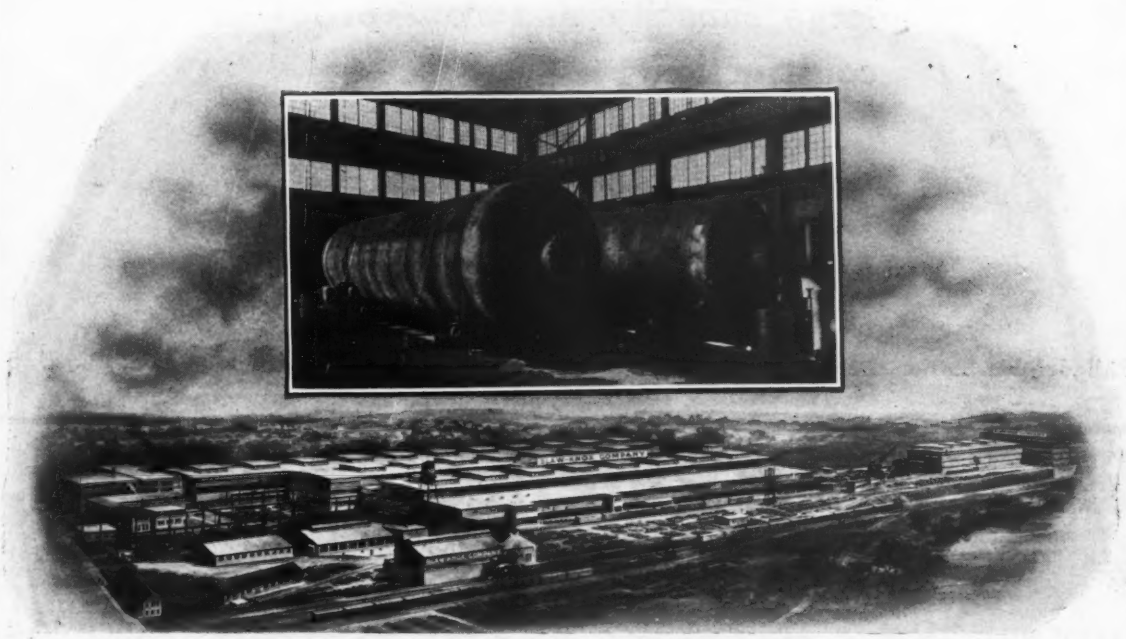

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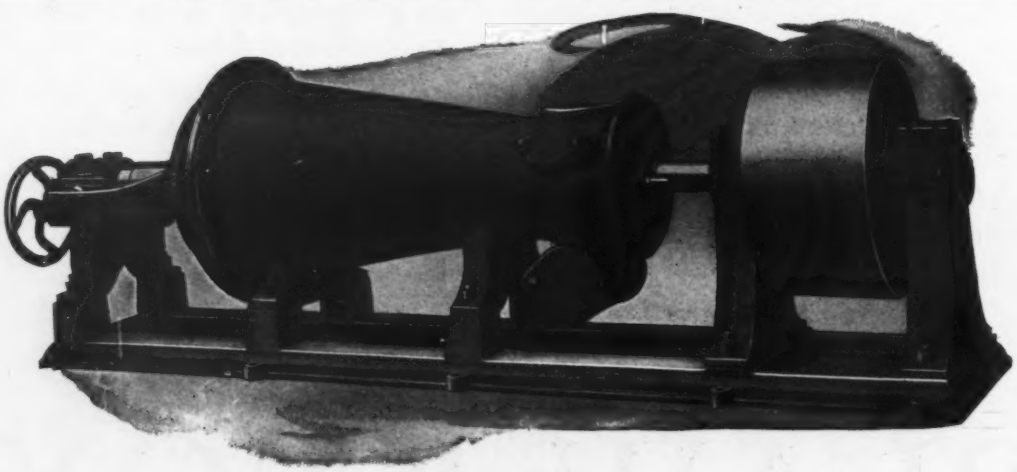

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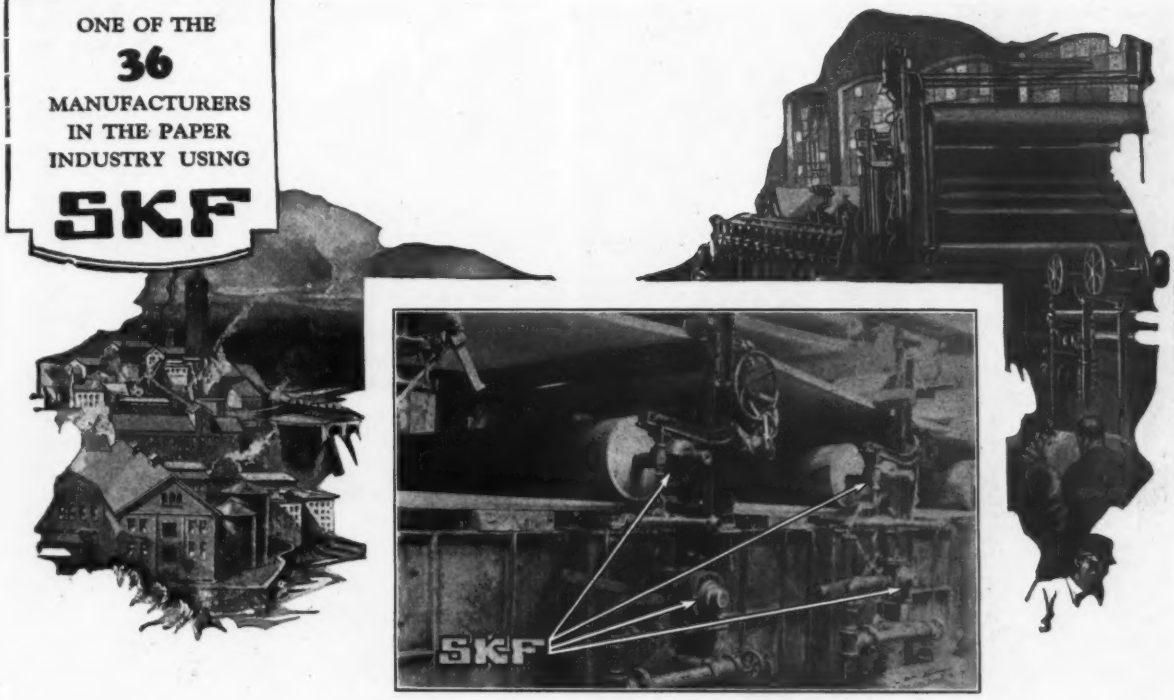

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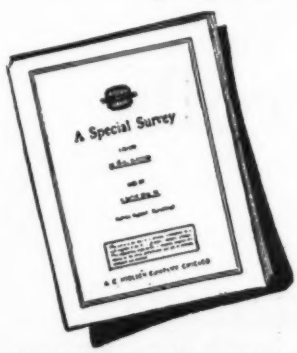

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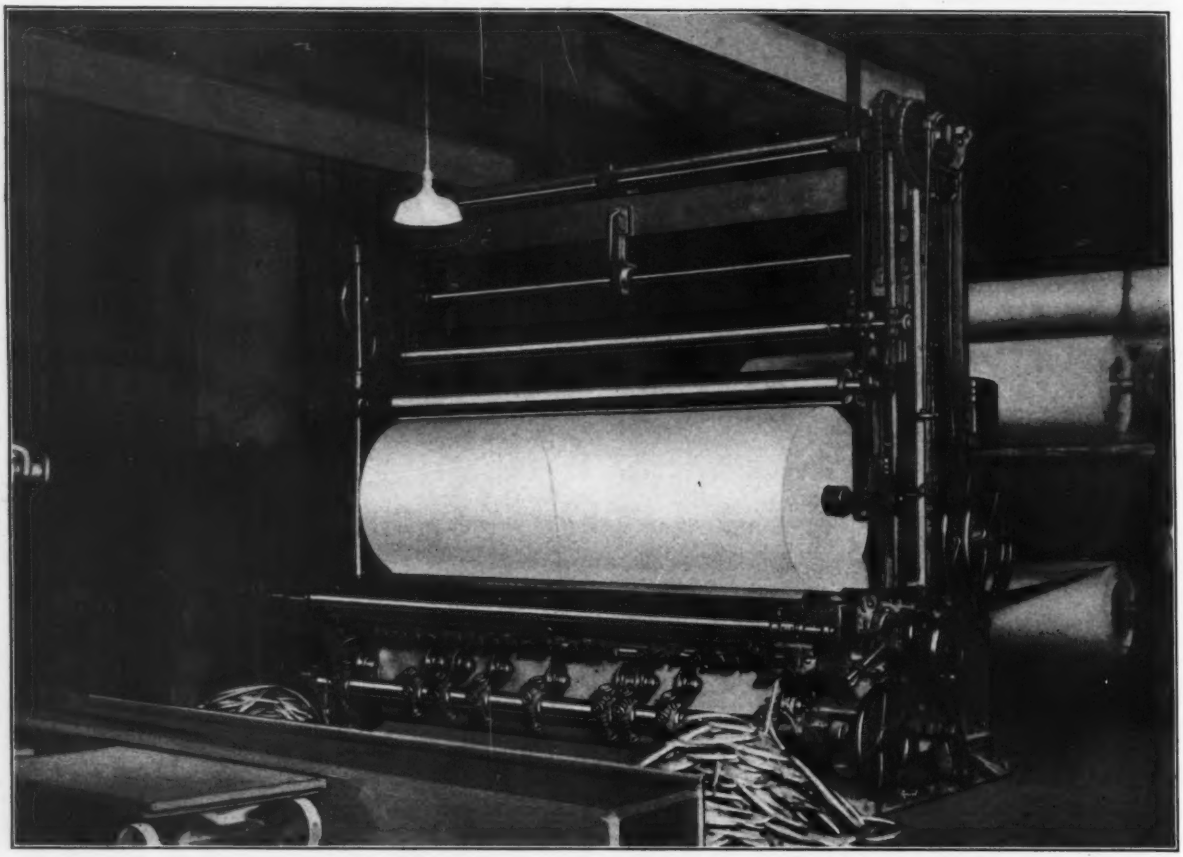

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ESTABLISHED 1872

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FIFTY-SIXTH YEAR

Published Every Thursday by the

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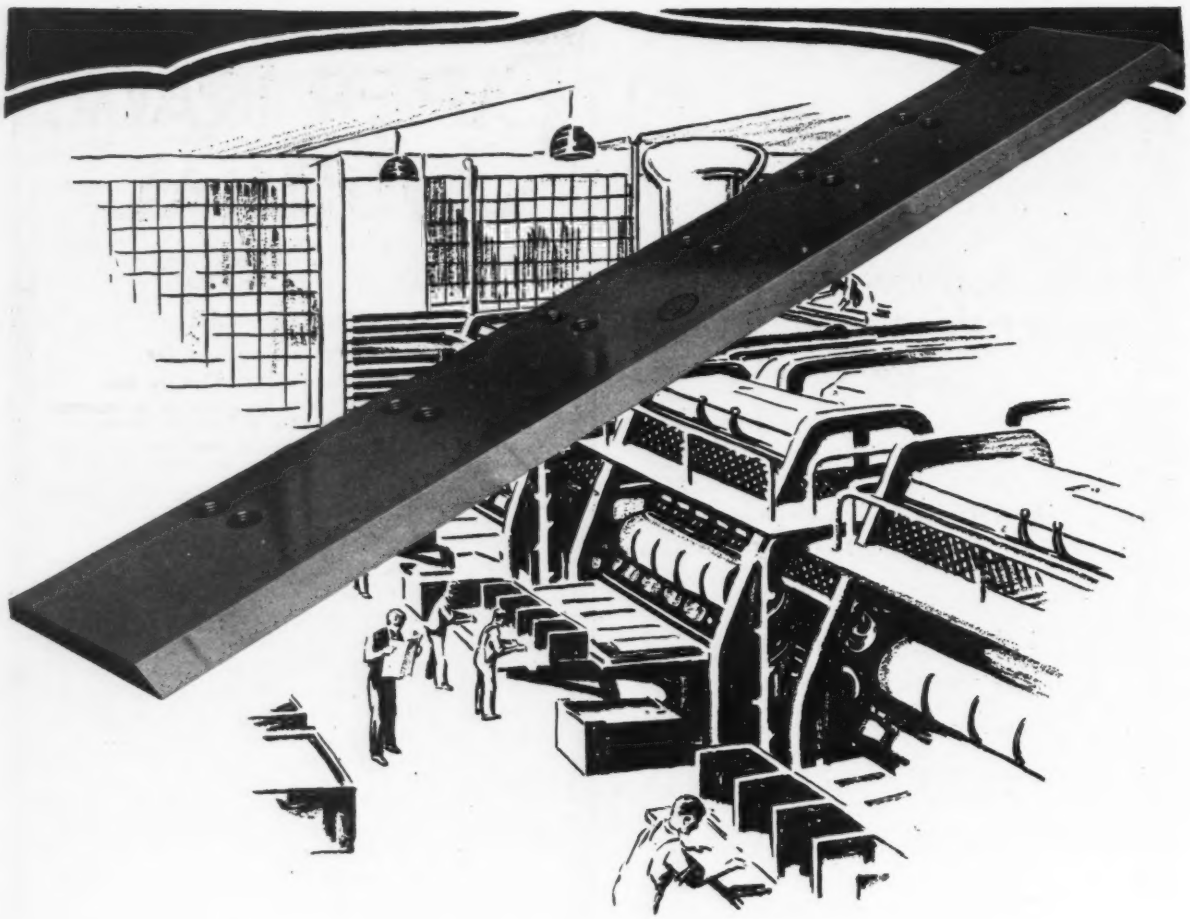

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PAPER TRADE JOURNAL

With Which Is Combined

PAPER

Vol. LXXXV, No. 22 Thursday, December 1, 1927

News Print Industry Contends With Problems

Halting Export Market Proves Embarrassing Factor in Situation Although a Moderate Improvement in Demand Was Experienced in the Elapsed Ten Months of Present Year—Mergers of Various Large Interests Expected to Gradually Overcome Over-Production Difficulties—Capacity Continues to Increase

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., November 28, 1927.—The difficulties with which the news print industry is contending at the present time are reflected in the October trade report, showing that the exports of news print for that month was somewhat less than in October, 1926. Seeing that news print producing capacity has been greatly increased in the intervening twelve months, this halting export market is a most embarrassing factor in the situation. However, taking the elapsed ten months of the current year, a moderate improvement in demand is noted, the exports having amounted to 1,532,696 tons, as compared with 1,421,849 tons for the similar period of 1926.

It is admitted here that so far the over-production problem has not been solved, though progress along that line has been made by the merger of various large companies. The fact that there are many independent concerns not party to the association of big producers means that the set market price may prove in practice only a nominal one. It is obvious that the associated companies are at a disadvantage if they curtail output to maintain price while independent companies are able to operate at capacity by slightly underselling the market. This situation is expected to speed up the consummation of merger plans.

Meanwhile capacity continues to increase. For instance, the Bathurst Company, of Bathurst, N. B., has under construction a second news print machine, which will come into operation next May, and increase the company's capacity from 70 tons of news print daily to 140 tons. This company not only supplies many of the newspapers in the Maritime Provinces, but also supplies the paper on which the *Wall Street Journal* is printed. Representatives of the Bathurst Company in New York were present in the press room of the *Wall Street Journal* when the first rolls of New Brunswick paper were put on the press, and they reported that the sheet was "100 per cent plus," that the first rolls used were well wound and that the publishers were very well pleased with the results. The rolls used are 35 inches wide.

Another development foreshadowed is the possibility of a news print mill being built in northern New Brunswick by the International Paper Company. The purchase by this company from the Fraser Companies of some 1,000 square miles of timber lands on the Restigouche River in northern New Brunswick has been carried through, it is said, in order to complete the forest reserves necessary for the proposed mill, and in view of the rapid development of the Grand Falls water power, an early announcement is looked for.

Canadians Interested in International

It is generally recognized that Canadian investors are largely interested in the International Paper Company. Many are said to have tucked away big blocks of the stock at around the 50 mark. One big Montreal operator, who has made a close study of the pulp and paper industry, is reported to have accumulated over 10,000 shares, while a number of others are known to own from 1,000 to 5,000 shares. In most cases they have intimated their intention of putting them away for a few years, as they are confident that International Paper will develop into a dominating factor in the industry.

Abitibi Shareholders Approve Merger

The shareholders of the Abitibi Power and Paper Company, at a special meeting in Montreal unanimously approved the plan for the Abitibi-Spanish River merger, and application will now be made to the government for approval of the changes in the capitalization.

One of the resolutions covered the split of two for one in the present stock of Abitibi, increasing this from 250,000 to 500,000 shares, and then adding 1,000,000 new shares, bringing the total up to 1,500,000 shares. The preferred stock of $1,000,000 will be increased by $50,000,000 of new 6 per cent preferred, as compared with 7 per cent on the old $1,000,000 of preferred. Another by-law was unanimously approved, increasing the number of directors from 10 to 21.

The proposed plan will enable the company to retire the 6 per cent preferred par for par at prices between 100 and 110, on 90 days' notice. The present 7 per cent preferred will rank prior to the new 6 per cent preferred.

Quebec Pulp and Paper Mills

At the close of the present month, the Port Alfred Pulp and Paper Corporation and Price Brothers acquire the assets of the Quebec Pulp and Paper Mills. In the meantime this company has been producing ground wood pulp. It is thought that after the plants are acquired by the two large news print operators, there will be no change in the activities of the Quebec Pulp and Paper Mills. As yet, the new owners of the property have formulated

(*Continued on page 70*)

Demand for Paper Below Normal in Chicago

Fine Paper Market Fairly Satisfactory, With Prices Holding Up Exceptionally Well—Reduction in Southern Kraft Prices Attributed to Desultory Request — News Print, Bonds, Wrapping Paper and Tissues, Moving in Good Shape

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, Ill., November 26, 1927.—Business isn't all that it really should be, nor all that it was expected to be. Here and there, in news print, coated and uncoated bonds, wrapping paper and tissue paper, demand is going along in good shape, especially in news print. Fine papers are just fair, the expected demand having failed to materialize to its fullest degree. Many paper men were not overly disappointed, for over production makes it impossible for any sensational selling to materialize. Prices in fine paper are holding up exceptionally well under existing conditions and the future outlook is promising.

A reduction in southern kraft prices, announced November 17 is said to be the result of a somewhat desultory demand. The reduction was somewhat expected for around the first of the year, but came sooner. A 4¼ cen base price on all rolls of 30 pounds and heavier is one important reduction. Others bring prices of sheets base price, for 30 pounds and heavier to 4½ cents. Rolls in the 25 pound classification are at 4½ cents.

Sheets in 25 pound weight are at four and three-quarters cents, base price. No differential is made on convertor rolls. Box board is in good shape and the use of boxes for packing holiday shipments, retail merchandise, etc., is going to be exceptionally gratifying, according to reports. New uses for boxes are reported almost every day. Their growing importance is reflected in the attention devoted to carton packing at the recent Chicago meeting of the National Paper Trade Association. Prices on old papers are holding firm with little change expected until after the first of the month, at least.

George D. Gaw's Plan Impresses

George D. Gaw of the Gaw-O'Hara Envelope Company, Chicago, has recently returned from the meeting of the Bureau of Envelope Manufacturers held at New York, November 11 and 12. Mr. Gaw made quite an impression with his plan that users of business envelopes can be sold on a basis of performance value of envelopes both as carriers and advertising media. Mr. Gaw suggested at the meeting that a limited amount of the Bureau's funds be used to foster association advertising. The plan was adopted and will include the use of full-page space in two colors in one or two of the leading publications circulating in the field of direct mail advertising. The advertising will be keyed on the performance values of the envelopes. An effort will be made to show the importance of envelopes in successful direct mail advertising.

Butler Organization Entertains Printers

The J. W. Butler Paper Company, Chicago, was host to a number of Chicago printers Tuesday of last week. The visiting printers met at the Butler plant late in the afternoon, enjoyed an excellent dinner and later took a trip through the testing laboratory and other departments of the big paper house. The J. W. Butler Paper Company is certainly a representative house for the printers to get acquainted with.

News of the Trade

A chart of vertical and horizontal ruling showing the widths between horizontal lines from 8 to 32 points and also displaying vertical rulings used in job books, journals, invoices, ledgers, etc., has been sent out to the printing trade by the Midland Paper Company, Chicago. The chart is an exceptionally good advertising stunt and also fills a genuine need.

The Mid-States Gummed Paper Company, Chicago, is now handling the representative line of the Thomas W. Price Company, Philadelphia. The line, known as "Excelsior Brand" is an excellent and well rounded stock of gummed paper.

The LaSalle Paper Company, representing the attractive "Atlantic Bond" line of the Eastern Manufacturing Company, is getting full co-operation from the latter house. The most recent booklet sent out to paper users gives special attention to the need of snappy holiday letterheads and also enclosed nine sales letters written by well known letter writers, all printed on Atlantic Bond, Substance 20. The paper comes in white and 12 colors together with four finishes. Atlantic cover is also proving a good seller.

The Paper Mills Company has recently sent out samples of Canterbury book in laid and wove designs, new samples of Veteran cover displayed in seven colors and a line of Saxonet in both heavy and light weights.

Logan G. Thomson, Champion Coated Paper Company, Hamilton, Ohio, visited in Chicago last Saturday while en route to the Michigan-Minnesota football game at Ann Arbor.

Lyman Dwight, Dwight Brothers Paper Company, Milwaukee, Wisconsin, was in Chicago for a day or two last week.

N. A. Schoenbucher, secretary of the Wrapping Paper Division of the National Paper Trade Association, returned to Chicago this week after an extended trip through the southern states.

Work of Paper Division Expands

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 23, 1927.—The number of inquiries on foreign markets for paper and paper products, and on the conditions influencing those markets, answered during the past year by the bureau's paper division was 21,861, an increase of 24 per cent over 1925-1926, says Dr. Julius Klein, chief of the Bureau of Foreign and Domestic Commerce in his annual report on the work of the paper section to the Secretary of Commerce. Manufacturers of paper and board products of all kinds received active assistance in finding markets abroad and were informed regularly of economic and commercial changes affecting sales possibilities.

The detailed survey of the pulp and paper resources, production, and trade of the world's producing countries was brought nearer completion, and most of the results have been made public. There was a special survey of the pulp and paper industry and trade of Canada. The survey of the box board, box, and carton industry and trade, begun last year, has been nearly completed, and the results will be published as soon as possible. Assistance was given the American Paper and Pulp Association in preparing a complete tariff history of the industry in the United States since 1789.

The latter part of the year was noteworthy by reason of increased demands for information bearing upon problems of distribution and consumption, both domestic and foreign, and also for material on new developments in the industry in North America and Europe. The paper division has made special efforts to help American manufacturers to find suitable representatives abroad, and a number of new "contracts" were made, it has been reported, for manufacturers not previously interested in exporting.

Trade information bulletins published under the auspices of the division complete the series on markets for paper and paper products in Latin America and also cover portions of Asia and Africa. Four special informational services were inaugurated in cooperation with trade associations.

Paper Business Very Satisfactory in Toronto

Volume of Orders Booked Exceeding Record of Corresponding Year—Demand for Kraft and Fiber Papers Active Due to Heavy Yuletide Trade—Paper Box Plants Working at Full Capacity—Paper Stock Situation Bright

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ont., November 28, 1927—The paper business has been very good during the past week in all lines and November will prove a better month than the corresponding period of last year if orders, which came to hand during the past few days, continue. The bigger printing establishments are busy with considerable work on hand and paper box plants are rushed to the limit. The demand for kraft and fiber papers is also quite active owing to the heavy Yuletide trade in many lines of business. There has been some falling off in the coated paper market but specialty plants are enjoying a fair volume of orders. There is naturally a disposition on the part of jobbers to let stocks run down as low as possible at this season in order that they may not be carrying too many goods when inventory period rolls around as it will in a month.

All business in the paper market is highly competitive but, through organization and cooperation, prices have been well maintained. The relations of the wholesalers with the mills and frequent meetings of the trade have steadied the industry at times when it might otherwise waver and the good results will be seen when the year's books are closed.

The rag and waste paper situation is encouraging and some dealers report that last month was the best in their history. Everything now betokens that 1928 will be a good year in the paper business and while there will be no boom, there is no dark cloud on the horizon and the feeling of optimism increases as each day brings the trade nearer the new year.

Another Sale of Limits

The sale of approximately fifteen square miles of jack-pine and pulp wood in the Thunder Bay district has been made by the Department of Lands and Forests of the Ontario Government to MacKenzie & Morrison Ltd., of Fort William. There were several bidders for the area, which lies east of Kashabowie Lake, north of the Canadian National Railways and the price paid for the Fort William firm was eleven dollars per thousand feet, board measure, for the jack-pine, twenty-five cents each for jack-pine ties and three dollars and ten cents per cord for the pulp wood. The contract stipulates that the timber in the district must be cut and removed by April 30, 1930.

McKinley & Hughes, pulp wood contractors, operating near Keego, Ont., have secured the contract for supplying a large quantity of pulp wood to the Thunder Bay Paper Company, Port Arthur, Ont.

Hauling Pulp Wood to the Tracks

There is not a great deal doing in the pulp wood market at the present time and new contracts will not be made with farmers, settlers and others by large contractors until January. In the meantime the wood, which has been cut at various points in Northern Ontario, is being hauled out to the track for shipment on the T. & N. O. and Transcontinental Railways to ship to various points. The mild weather, which has prevailed for some time in November, interfered with bringing out the wood but since the advent of colder days, the situation has improved. The cut along the T. & N. O. points will be about the same at last year.

There has not been as keen a demand for poplar during the past season as last year or the year before, but this was owing to the mills having large stocks on hand and not entering the market for supplies. Just as much poplar pulp wood is being used as ever, but conditions make the call a little weaker than formerly. The situation in pulp wood is otherwise unchanged and prices are about the same as they were a year ago. After the first of the year many carloads of pulpwood will be coming south on the T. & N. O. Railway.

New System of Getting Out Wood

The Provincial Paper Mills, Ltd., Toronto, have busy plants at Mills Roches, Therold, Georgetown and Port Arthur, Ont., and have the headquarters of their woods department at Port Arthur, in which district the pulp wood limits of the company are located. The company find that labor is very plentiful this year and wages are about the same as last. At this particular period in 1926 there was a general strike of bushmen in the Thunder Bay district but there has been no trouble with the men so far this season.

The Provincial Paper Mills do not use contractors in securing their wood and the men in the camps of the organization are nearly all piece-workers. The cutting and hauling are done at a price per cord. The roads are also cut at a price per foot or station of 100 feet.

The Provincial Paper Mills in their woods activities employ a shacker system for small blocks of timber. Under this system a party of ten men or thereabouts sign a contract to cut and haul the wood to the landing or railway. The company furnishes all the necessary equipment for which the shackers are charged and credit is given, less breakages, upon completion of the contract. Horses and sleighs are furnished by the company and also the fodder for the horses. The shackers simply supply the labor, build their own camps, cut their roads and take out the wood. The division of their earnings is left to themselves and the individual earnings of each man does not concern the company. The cutting is supervised and scaling is done by a representative of the Provincial Paper Mills organization. The company find that this has worked very satisfactorily in isolated blocks of timber where the haul is not too long.

Notes and Jottings of the Trade

Charles V. Syrett, head of the C. V. Syrett Paper Company, Toronto, has been giving short talks over the radio from station CKCL, Toronto. The subject of his first address was "How Paper Is Made" and of the second "A Few Facts About Paper."

A. M. Koroleff, logging engineer of the Canadian Pulp and Paper Association, recently returned from attending the Pacific Logging Congress at Tacoma, Wash. He paid a visit to a number of Canadian paper mills in the West and discussed with the heads of these departments some of their logging and forestry problems.

Richard Beaston, woods manager of the southern mills of the West Virginia Pulp and Paper Company, Tyrone, Pa., spent a few days in Toronto recently on business.

Forbes Hyland, of the staff of the Thompson and Hyland Company, Toronto, and his bride, Miss M. Gillam, of Toronto, have returned after spending their honeymoon in Atlantic City, Philadelphia, and other points East.

E. A. Brenckenridge, vice-president of the Thompson and Heyland Lumber Company, Toronto, spent a few days recently at Cochrane, Ont., in connection with the pulp wood contracts of this organization which will handle about 150,000 cords during the coming year.

United Paper Mills, Ltd., Toronto, will open their new branch warehouse in London, Ont., about the middle of next month. W. W. Howell will be in charge and Mr. Ferneaux, of Hamilton, has joined the sales staff of the London branch.

Tenders are being called for by the Ontario Department of Lands and Forests to cut the red and white pine timber in the township of MacBeth, Temagami Forest Reserve, being an area of 36 square miles. Bids will be received up to December 22.

Plant Inspection and Safety Committees*

By B. D. Rogers, Manager, Labor Bureau, Bird & Son, East Walpole, Mass.

This paper on Plant Inspection and Safety Committees will center around the methods which we feel have proved fairly successful in our plants.

The first point, and one that I believe everyone interested in the movement agrees upon, is that the best, or even satisfactory, results can be obtained only when every member of the working organization is heart and soul in safety work. By that I mean the owners, the management, the supervisors and the workers. Everyone in the organization is jointly responsible for the success and promotion of safety as an integral part of any mill.

In our company the safety organization consists of a central safety committee, five local plant safety committees and the safety inspector.

The function of the central safety committee is to direct and keep alive all matters pertaining to safety. Its membership consists of the general manufacturing manager, assistant manufacturing manager, plant engineer, superintendents of all plants, chief engineer, safety inspector and manager of labor bureau.

Our local plant safety committees consist of from ten to fifteen members depending upon the number of departments or workers in those plants. The superintendent of each plant is the permanent chairman of the committee. The other members include both foremen and workers. Appointments are made every six months by the central safety committee upon recommendation by the superintendent. Usually a member continues on the committee for a year so that only one half of the committee changes at one time.

Safety Inspector General Responsible

Our safety inspector is directly responsible to our general manufacturing manager and, hence, his work is directive and official. His inspections are regular and continuous, and deal with:

1. The elimination of accident hazards through unsafe conditions and careless practices. This means the recommendation of safeguards, safe working conditions, repairs to dangerous equipment, etc., and the correction of working habits of men and women who do not follow safe practices.

2. The maintenance of safe working by cooperation with the foreman. The inspector should see that the safety idea is always kept before the men. If a machine has a guard, he should see that it is used or kept in place. If a safety rule is established, he should see that the rule is followed at all times. If he condemns any equipment, he should see that it is repaired or destroyed. Every new employee is interviewed by the inspector during his first week of employment.

3. The follow-up and investigation of accidents that do happen. He receives a report of every accident that occurs and he should follow up these reports with a thorough investigation of the accident, which means inspection of the place where the accident occurred, talk with injured man, with the foreman and further interviewing of many others who might give light on where, how, or why the accident happened. His report covers his own views regarding the accident and he should make recommendations as to how its recurrence can be prevented.

4. Co-operation with insurance and other outside agencies. The safety inspector should at all times accompany representatives from the state departments and insurance companies who come to inspect the plant. By doing this he can not only point out to the inspector the work done in the plant, but he can receive from him many ideas and anecdotes from other plants that will help him in his work.

5. Fire prevention. In some plants the same man handles fire inspection who handles safety. Except in a small plant, this is not the best arrangement. The safety inspector should have enough to do in working on all the phases of safety unless, of course, he works in an industrial Utopia where all hazards are guarded, no one is careless, and there are never any accidents. Safety work in plants employing 1,000 workers or more is a one man job. It is not a job for a man who must devote part of his time in trying out fire extinguishers, testing fire alarms, or filling in on other odd jobs. If he is to be heart and soul with safety, he must do safety work and nothing else.

As I have said before, the safety inspector should report to a high official in the company, the higher in authority the better for him and for safety. He should not be forced to argue with a foreman of a department as to whether a guard is needed on some machine or not. If he, the inspector, after thorough investigation believes that there should be a guard, his word should be backed up solidly by his superior.

Everyone in the plant down to the lowest worker should know that what the inspector says goes—not that he should be feared, but he should above all things be respected.

Work of Plant Safety Committees

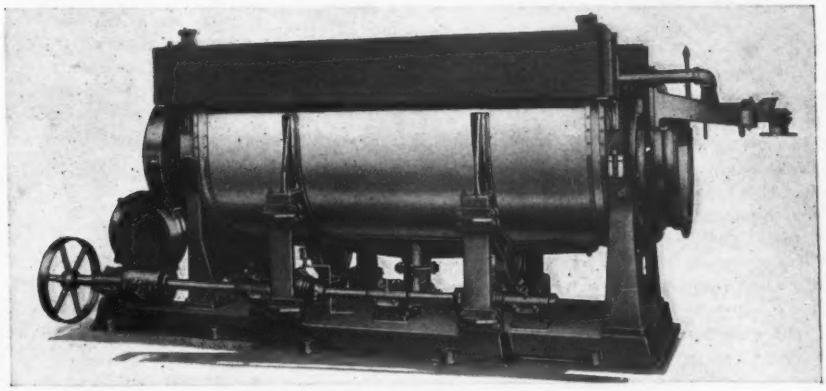
The work of the plant safety committees, on the other hand, is of utmost importance in selling the safety idea to the workers throughout the organization. The suggestions made by the members of the plant committees should and do receive careful consideration. If a safety committeeman makes a suggestion that is adopted, it so appears in the records, and when possible is given sufficient publicity so that all workers will know that the committeemen are on the job and that their work is backed up and appreciated by those in authority. To bring up a good suggestion, have it receive only grudging attention, and then see the same idea later adopted as coming, say from a foreman, is discouraging to any safety committeeman and may result in it being the last suggestion that he ever makes.

Plant safety committees should meet regularly at least once a month, oftener if necessary. In our plants the names of committeemen are posted in the departments in which they work so that all employees know who the safety man is in their section. We also publish pictures and names of all committees in our plant paper so that they are known to everyone and we encourage their fellow-workers to go to them with their safety suggestions.

The method of plant inspections by the safety committees vary in our different plants and from time to time. In some committees two or three members are delegated to act as unofficial inspectors for that month, while in others all members of the committee are delegated to inspection tours. These men are released from their jobs for as long a period as is necessary to make the inspections and a report of their findings and recommendations is made at the meetings. I believe that our most thorough investigations and best recommendations are received when we ask for an inspection on special things such as cranes and chain falls, tractors, trucks and trailers, elevators, dangerous pulleys, and belts, etc. In that way the committeemen are looking for specific things instead of everything in general and better results are obtained.

We feel that our plant is well taken care of so far as mechanical safeguards are concerned. The plant committeemen know this very well and are told that it is not the number of guards and other things that a man suggests that determines his value as a safety man, but rather the example he sets by his own actions and the

*Delivered at the Annual Meeting of the Pulp and Paper Section of the National Safety Council, Chicago.



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advice he gives his fellow-workers every day as he goes about his work.

Interesting New Members

When a new member is appointed he is sent a personal letter from the central safety committee reading something like this:

We are very glad indeed to notify you that at the last meeting of the central safety committee you were appointed a member of the———safety committee.

We ask that you assist in every way possible to make our plant as safe a place to work in as there is anywhere, that you caution any employee at any time who is doing an unsafe thing or working in a manner that may endanger himself or others.

Your committee holds regular meetings each month, notifications will be sent to you, and it is part of your job to attend every one of these meetings.

There are many ways in which you can assist in keeping your fellow-workmen from getting injured. Many of them you know, and others will be taken up at your committee meetings. Remember that over 90 per cent of our accidents, in fact of all accidents, are caused by carelessness of the individual. Very few are caused by machines. Therefore, it is necessary to continually keep the safety viewpoint in everyone's mind.

We are enclosing a safety button which is the badge of the safety committee and we hope that you will wear it at all times.

When a workman is serving on the committee, we try and interest him in safety work so that when his term is up he becomes a true disciple of safety. Consequently, when the membership is changed, another personal letter is sent to the member which reads somewhat as follows:

As is customary at this time, we are changing some of the members of our safety committee and appointing several new members. Your place on the committee has been taken by one of your fellow-workmen.

You know, from your activities on the committee, that it is by getting every one's interest in safety that we can accomplish the most good. Consequently, we want you to continue to do everything in your power to help make our plant the safest place in the world to work in.

We know that from your experience on the committee you realize what a tremendous loss accidents are and how easily they can be prevented, if we can only keep the men thinking about being careful. We believe we can depend on you for your continued interest in this very important subject which effects every single man and woman that works for Bird & Son.

Court of Judgment

By the plant committees all accidents are carefully gone over and discussed. We have at times had the safety committee sit as court of judgment on workers who have been injured. The injured man, his foreman and others concerned with the accident are brought before the committee. All sides of the case are heard. The committee discusses any questions and finally passes judgment on the cause and responsibility of the accident. This decision is sometimes posted on the bulletin board or otherwise given publicity. Allowing the committee authority to set any real punishment is questionable, but it is certain that by bringing this before the committee it impresses the worker with the idea that his fellow-workers and the company are taking it as a serious matter.

The safety committeemen can be of invaluable aid in general everyday cooperation in safety work. If horse-play starts in the absence of the foreman, it is the safety committeemen who can tactfully say, "Easy, boys, or somebody will get hurt," or if he sees an unsafe practice being carried on he can easily bring it to the attention of the worker or the company and have it stopped. Further the committeemen have good ideas on safety publicity. If you are having a "no-accident" week or month, form a publicity committee of local safety committeemen. They will often bring forth excellent ideas for publicity on such occasions. It is also a good idea in such cases and even in the general run of safety publicity to give the safety committees credit by signing notices, posters, etc., as coming from them.

At our plant we have designed a safety seal showing our safety button, a man representative of our safety committees and the words "The Sign of Vigilance." This sign appears on monthly record sheets of accidents, on a little safety newspaper published during the month and in the corner of a series of safety posters that we are issuing.

In general, while the foreman is frequently the authoritative link between the officials of the company including the safety inspector and the men in the mill, the plant safety committees are the cooperative links invaluable when used in the right way.

Canadian Pulp and Paper Exports

Exports of woodpulp and paper from Canada in October were valued at $14,729,261, according to a report issued by the Canadian Pulp and Paper Association. Compared with the total for September this was a decline of $919,404 and was also lower than the total for October, 1926, by $917,988.

October exports of woodpulp were valued at $3,707,222 and of paper at $11,022,039, as compared with $4,074,215 and $11,574,450 respectively in September.

For the various grades of pulp and paper, details are as follows:

	October, 1927		October, 1926	
	Tons	$	Tons	$
PULP:				
Mechanical	22,819	617,027	36,159	1,053,685
Sulphite Bleached	18,675	1,458,778	18,842	1,448,521
Sulphite Unbleached	12,297	634,585	21,340	1,196,994
Sulphate	16,247	954,243	15,292	933,843
Screenings	2,359	42,589	.....	.....
	72,397	3,707,222	91,633	4,633,043
PAPER:				
News Print	159,284	10,461,411	159,509	10,434,174
Wrapping	1,283	140,101	1,282	148,510
Book (cwts.)	7,772	54,784	6,915	57,237
Writing (cwts.)	851	6,317	922	6,837
All Other	.....	359 426	.....	367,448
		11,022,039		11,014,206

For the first ten months of the current year the total value of the exports of pulp and paper amounted to $144,775,700 as compared with $142,737,970 in the corresponding months of 1926, an increase for this year of $2,037,730.

Of the total in this period exports of woodpulp accounted for $39,038,429 and of paper for $105,737,271; the respective totals for the ten months of 1926 being $43,004,510 and $99,733,460.

Total for the various grades of pulp and paper in the ten months' period are as follows:

	10 months, 1927		10 months, 1926	
	Tons	$	Tons	$
PULP:				
Mechanical	216,435	6,508,041	311,546	9,397,285
Sulphite Bleached	196,967	15,270,840	168,866	13,170,983
Sulphite Unbleached	158,281	8,541,468	207,746	11,782,644
Sulphate	140,513	8,454,488	139,031	8,653,598
Screenings	13,997	263,592	.....	.....
	726,193	39,038,429	827,189	43,004,510
PAPER:				
News Print	1,532,696	100,371,716	1,421,849	93,626,449
Wrapping	12,093	1,367.138	15,566	1,916,594
Book (cwts.)	85,874	586,879	48,767	418,188
Writing (cwts.)	11,533	92,659	16,483	122,730
All Other	.....	3,318,879	.....	3,649,499
		105,737,271		99,733,460

Exports of pulp wood this year have been considerably greater than for last year, the total for the first ten months being 1,440,629 cords valued at $14,645,341 as compared with 1,249,907 cords valued at $12,590,638 in the corresponding months of 1926.

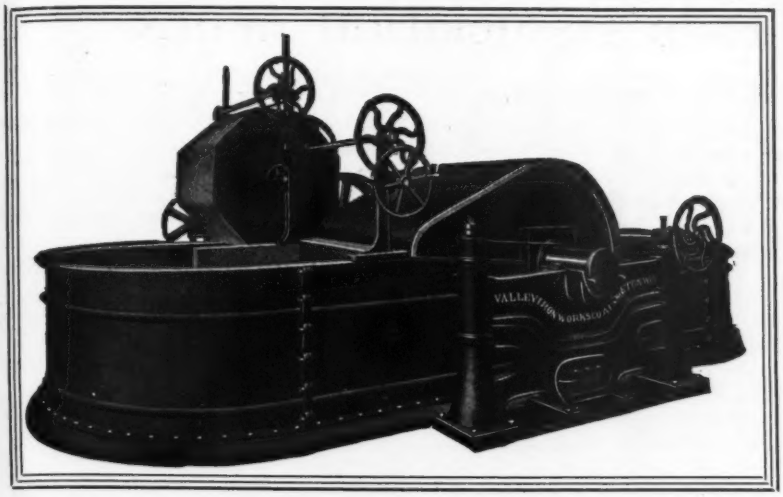
Enders Finds Paper Industry Thriving in West

[FROM OUR REGULAR CORRESPONDENT]

PORTLAND, Ore., November 24, 1927.—F. Enders, of the Bulkley-Dunton Company, New York, is visiting in the Pacific Northwest. Mr. Enders expressed satisfaction at the progress and expansion of the paper and pulp industry in this section. He stated that his trip had for its prime motive the establishing of selling connections, but he also observed that his firm might even consider a manufacturing proposition.

Superintendents to Convene at Pittsfield Next Year

The 1928 Annual Convention of the American Pulp and Paper Superintendents Association will be held at Pittsfield, Mass.



Do Away With Faulty Beating—

INCREASED QUALITY of your paper is the natural result of elimination of faulty beating. When faulty beating goes, inferior quality also goes with it.

Valley Holland Beaters are the result of years of study by men with broad paper making experience—and because they are designed right Valley Holland Beaters do overcome faulty beating. Their superiority is definitely established. The large number of re-orders from mills who have installed Valley Holland Beaters is the best testimonial for their use.

Special features of design—found in no other equipment for similar use—put Valley Holland Beaters in a class by themselves. Exceptional performance, economy in operation, high efficiency, great durability are some of the reasons for the general acceptance of Valley Holland Beaters—all reasons reflecting themselves in better paper.

Let us tell you more about how to eliminate faulty beating. Complete information on the Valley Holland Beater is contained in our special booklet "Valley Holland Beaters," sent upon request.

VALLEY IRON WORKS CO.

Machinery for Paper and Pulp Mills

APPLETON WISCONSIN

New York Office: 350 Madison Avenue

Western Manufacturing & Sales Division, Smith & Valley Iron Works Co., Portland, Oregon

Practical Trade Association Work

By O. M. Porter, Secretary Binders Board, Glazed and Fancy, Gummed Tape and Pulp Producers Associations

Trade Associations exist because they enable competitors to co-operate with one another in developing their industry on a profitable and more permanently satisfactory basis. They are frequently organized to meet some specific conditions or when general conditions become such that it is impossible for the individual units of the industry to operate at a profit.

Trade Association Development

In the development of a trade association the progress is frequently somewhat as follows:

1. Leading executives meet together frequently enough to develop confidence through personal acquaintance, and a willingness to co-operate for the solution of common problems.
2. It is essential to know how much of the industry's products or its various grades is actually being produced, how fast they are moving or accumulating at the members' mills, what the raw material situation is, and what the finished goods are actually being sold for in the various markets. The Association must collect facts to replace rumors and malicious gossip and which will indicate the individuals' position in relation to that of the group.
3. Trade Customs should be developed to cover the conditions under which the industry's goods will be marketed. They may be general or explicit but they must be maintained and adhered to by all members of the Association.
4. The ultimate aim of any trade associations is to enable its members to do business more profitably and more satisfactorily. This means that members must know their costs and the prices at which their products are being sold. The present anti-trust laws permit considerable freedom in the legitimate discussion of past prices and in the development of uniform cost accounting methods. They do not permit concerted action to control price, divide territory or limit production.
5. Members of an industry, acting together, can prevent unnecessary, heavy losses, to which as individuals each would be subjected through the activities of the credit crook, by the development of a practical Credit Bureau Service giving the facts as shown by the ledger accounts of member mills.
6. Simplification and standardization play an important part in profitable trade association work in reducing unnecessary sizes, shades, colors, varieties, etc., thus inventory and costs.
7. Other steps which follow logically and legitimately in the development of the useful trade association are market analyses, co-operative advertising, trade promotion, collective buying, research, etc.

Manager's Responsibility

The manager of a trade association is not a clerk. In a measure he is responsible for the success of the industry. It is absolutely essential that he have the confidence of individual members and that through him mutual confidence among members be gradually developed. He must not be handicapped by lack of assistance or equipment and he should spend a considerable portion of his time in the field visiting his members in their own offices. His activities and those of the Association should be supervised by competent legal counsel.

Membership a Good Investment

Membership in a trade association is an investment which will pay substantial dividends if the members take active part in its development and make it a vital factor in the industry and hence in the success of their individual companies. Membership dues must not be considered as contributions to the support of the association, but rather as "profits insurance," for the individual companies and the industry as a whole.

Work of the Import Committee

A large number of cases in which the Import Committee of the American Paper Industry has been active in behalf of the domestic producers have been decided by governmental authorities, or abandoned before trial by the importers.

Among the cases on which departmental action has been taken are the following:

Unfinished hanging paper stock imported at New York from Germany held by court to have been undervalued.

Swedish kraft, light weight, held by appraiser to have been undervalued.

Wrapping paper undervalued at several ports.

German vegetable parchment held to be undervalued.

Ground wood book papers claimed to be standard news print held to be dutiable as printing.

Board claimed to be dutiable at 10 per cent by importer held by appraiser to be dutiable at 30 per cent as glazed board.

Paper claimed to be printing by importer, held by appraiser to be dutiable as writing.

Vulcanized fiber undervalued.

Catalogue paper undervalued.

Manifold bond claimed by importer to be wrapping paper, held by appraiser to be dutiable as manifold.

Manifold paper claimed by importer to be printing, held by appraiser to be dutiable under writing paper paragraph.

Greeting card stock held by appraiser to be undervalued.

Bristol claimed by importer to be board, but bristol rate applied.

Cover paper undervalued.

Importers have abandoned the following cases which they had carried to the Customs Court, but which they dropped before going to trial.

Tissue paper claimed by importer to be dutiable at 30 per cent as wrapping paper. The paper weighed between six and ten pounds per ream, and was held by the appraiser to be dutiable at 5 cents per pound and 15 per cent.

Filtering paper held dutiable, but claimed by importer to be free of duty as scientific apparatus.

Maroon double flint glazed paper imported at Philadelphia, held to be undervalued.

Paper imported at Philadelphia with fancy design lithographically printed; claimed by importer to be dutiable at lower rate as printed matter.

Hanging paper held by New York appraiser to be colored, claimed by importer to be dutiable at lower rate as uncolored.

Red paper for greeting booklets, claimed by importer to be printing paper, held by appraiser to be dutiable as cover paper.

Boxed stationery held by New York appraiser to be subject to additional duty of 10 per cent for special finish.

Plympton Joins Lincoln Electric Co. Staff

[FROM OUR REGULAR CORRESPONDENT]

CLEVELAND, Ohio, November 26, 1927.—The Lincoln Electric Company, of Cleveland, Ohio, announces the appointment of R. M. Plympton as salesman in charge of consumer motor business in Chicago. Mr. Plympton will work under the direction of R. D. Malm, Chicago District Manager.

Mr. Plympton comes to The Lincoln Electric Company with a noteworthy record of sales experience and wide business acquaintanceship. He was formerly assistant sales manager for the Babson Statistical Association, Wellesley Hills, Mass.

MORE HISTORY!

"Simple facts not foolish statements."

CHAPTER VIII.

DILTS NEW TYPE BEATERS.

Read this letter from the general superintendent of a large corporation operating several paper mills and using a number of Dilts NEW TYPE Beaters, and also other beaters rebuilt to the Dilts NEW TYPE:

> **"Our three 45" x 44" beaters formerly carried 600 lbs. of all sulphite stock and since your rebuilt them they carry 1000 lbs. each, while on 60% old paper furnish we now get 1300 lbs. as against 900 lbs. before rebuilt.**
>
> **"We can beat off in about one-half the time we formerly did. We run the roll only 1600' per minute, the stock travels 32' per minute at 5% and we estimate the power at 32 HP. per beater.**
>
> **"We are well pleased with the results."**

This is an increase of 66% in cubic capacity, a saving of 50% in beating time, no perceptible increase in power, and an increase of over 300% in efficiency.

Suppose you look over your own beaters right now and then write us to come and show you what can be done to improve them.

"Your paper is made in your beaters."

Dilts

MACHINE WORKS, Inc. FULTON, N.Y.

EXPORT OFFICE ~15 PARK ROW~ NEW YORK CITY

Selling the Paper Industry*

By George Gibson

I am appearing here to speak on the subject that has been assigned to me, not in the interest of any mill nor in the interest of any merchant, nor in the interest particularly of any division of the industry, but in behalf of the paper industry which, in my judgment, should be the noblest industry in America, bar none. I say it ought to be; it is going to be one of these days, but I submit to you gentlemen the thing that makes the industry noble is the noble men that are in it, and we will have no trouble in taking the fore rank of all the industries in the United States when more big, noble men of character and ability come into the industry.

If I interpret the signs of the times right, the aim of this present era is to find men to sell paper. A roll of paper won't sell itself; a bundle of tissue won't go out and bring in any profits by itself. It is only as commodities are linked up to personalities that they achieve any standing in the world of commerce.

Do you know there was a trade name of five letters that sold the other day for $16,000,000 a letter plus the physical assets of the concern? That was Dodge, Detroit. The Dodge Brothers made their name worth something. It was the personality of those men, the character of those men, that made the production of the Dodge cars worth millions.

You merchants are gathered here together for a paper trade convention, and I don't know that I have ever seen longer faces than I have seen around the Congress Hotel here today. On inquiry, I find you have some problems, but let me say that you are not the only people in commerce and industry in the United States that have problems. Just step into a meeting of the wholesale grocers and look them over and see the expressions of disheartened and beaten men, written on their countenances. Look over the hardware men, and now the wholesale dry goods men. They all have problems.

Question of Distribution

How do these problems arise? Where do they come from? From distribution. This question of distribution in which you are so intensely interested came out of the War and is one of the great issues that confronted the ultimate consumer. Sixty-two cents of every dollar the consumer paid for his goods went for distribution. What manufacturers have been trying to do and what the ultimate consumer has been trying to do is to cut that cost, and therefore, we have had to find new ways of approach, new ways of bringing commodities from point of origin to point of destination and to the ultimate consumer at a lower distribution cost.

Every step has been scrutinized and analyzed. We are all trying to cut the cost in every conceivable way. Some are radical changes. For instance, the chain stores present an economic saving to the consumer and they are here to stay. We might just as well admit it. I can remember years ago when the merchants all over this land got up and raised hob and even passed legislation against Montgomery Ward and Sears, Roebuck, but they are here and are growing and will stay for they are bulwarked on an economic foundation—lower distribution costs to the consumer.

What else is the matter with business today? Are there other problems? I'll say there are. There is one in particular which drastically affects all of our processes. I want to discuss it with you. It is Over-Production.

Over-Production

Over-production is apparent in every line of industry in the United States—an inheritance of the war—also, improvement in transportation—the most unparalleled in its history—quick deliveries by motor trucks and cheap money have all contributed to over-production. Out of over-production arises unfair competition. That is where you get it. Unfair competition is the deadly enemy of profit. Until that over-production is curtailed and unfair competition is stopped, your net profit control—while remedial—will not, in my judgment, come to its fruition.

What we must do is to stop over-production. Look at the oil men. Right in the next room they are having a meeting and I heard a man get up and tell about the troubles that they were having in the gasoline, lubricating oil and the fuel oil fields. Over-production—that is all there is to it. Over-production all along the line—unfair competition, cutting prices and no profits.

Over-production is the enemy of profit and you and I are in business to make a profit. Men! Profits are the life blood of industry just as your blood is the life of your body. If you don't believe it is the life-giving element, just open your veins and your arteries, dissipate your blood and you will land in the undertaker's hands. The same thing happens when you lose the profits of your industry—you land in the hands of the financial undertaker, the bankruptcy court.

Over-production has run its race and over-production has served a good purpose, too. I have never known a time in the history of the country when the financiers and the investors and the monied people are such a unit as they are today in saying "thumbs down" on furnishing any more finances to any industry or division of industry in which over-production is apparent.

Paper and Lumber Situation

Of all this wicked over-production, the wickedest and most senseless I know of is in the paper and lumber business. The latest Government statistics show that for every cord of wood cut from our forests for use, four and one-half cords of wood are destroyed by fungi, insects and fire.

I was talking just today with one of the representatives of one of the largest of our paper producers. They have great timber limits up in Canada He told me he went out fifty-five miles from any railroad or any habitation on a hunting trip recently, and he finally got into one of the most wonderful and beautiful forests of pure spruce timber which was miles and miles in extent. They went into this forest, but after they got into it a ways, they ran into downed timber—beautiful timber, some of it two feet through, all down, all dead. The spruce bud worm had gotten into those trees and killed ninety-five per cent of that standing timber. Such insect losses go on daily.

Last year, over in British Columbia, which is the last great timber reserve Canada has, they burned by fire 1,750,000 acres of standing timber.

The forest fire loss in this country last year was $27,000,000—24,300,000 acres burned.

And now, let me tell you, that the figures show on final analysis that there is remaining, at the rate of consumption and waste going on in Canada, only ten years' supply of timber and in the United States, seven years' supply. The consumption and waste of timber in the United States today is at the rate of twenty-five billion cubic feet and over in Canada approximately sixteen billion cubic feet of waste and consumption—and this waste and consumption is increasing daily. I say it is the wickedest situation, the wickedest, stupidest over-production in the world.

Using the Natural Resources

Here we are, men in this generation, using up the natural resources of the coming generation at no profit—leaving us not one scintilla of justification for our wanton waste and profitless consumption.

Why, you ask, is such a condition possible? I'll tell you. There is no compelling public interest about this matter of timber con-

* Delivered at the Fall Meeting of the National Paper Trade Association of the United States, Chicago, Ill.

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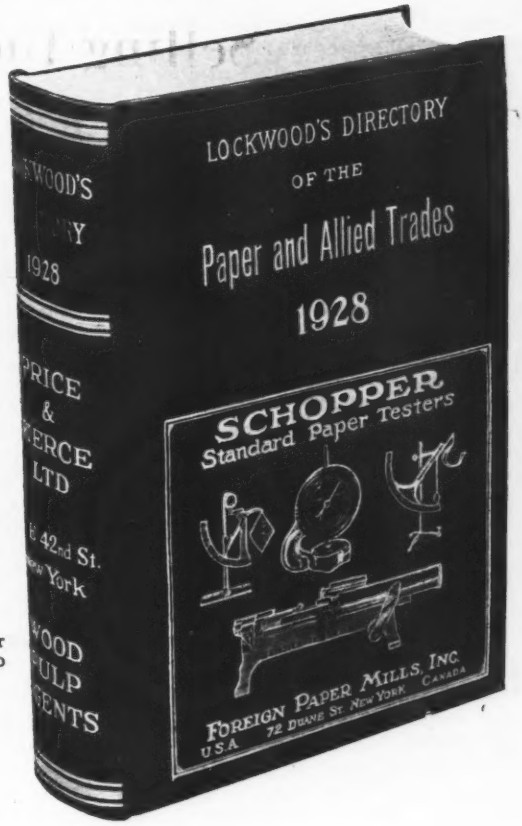
LOCKWOOD'S DIRECTORY

of the Paper & Pulp *and* Allied Industries



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servation. The average consumer, the average citizen and the average man in the paper and lumber industry knows just two things; one is the amount of timber needed for lumber and the other, the amount of timber needed for paper. That is all. He takes the figures for the remaining standing timber and divides into it the amount consumed in the paper and lumber industries and says:"We have timber in perpetuity,"—not knowing that we are wasting almost five cords of wood for every cord used.

I was born in Wisconsin, raised in Wisconsin, educated in Wisconsin and there is scarcely a square mile of the state that I haven't been over. Twenty-five years ago when we were making about a million tons of paper for the entire paper industry in the United States, it did look as though we had timber in perpetuity. But where you are using it as we are this year—almost ten million tons —there is a 1000% increase which couldn't be visualized twenty five years ago. Look at the State of New York. It was a self-contained, supporting State for the paper industry twenty-five years ago; today, it is importing eighty-five percent of its wood. Wisconsin is importing forty per cent and increasing its imports rapidly. There is mighty little wood let in Wisconsin on the basis of its present consumption and waste. We have to go to northern Minnesota for our wood and we are bringing it in from Canada also. We are bringing our pulp in from Scandinavia at our lake ports and shipping it into our mills in the interior of this country.

Paper Mill Consumption

Fifty-five per cent of our raw material in the paper industry must come from outside the United States, and our consumption is growing by leaps and bounds. In talking with one of the foremost statisticians in the United States, and checking up the per capita consumption of paper, he said: "I have figures to show that the consumption of paper will be nearer two hundred pounds per capita of paper in 1927 than it is 158."

You say: "What are we going to do about it?" My subject is "Selling the Paper Industry." There are three words I like and "selling" is one of them. I am glad they said "selling" instead of "buying", for another thing I find wrong with the paper industry is that we have too many purchasing agents and too few salesmen. I mean by that—we have men who buy their orders. They don't sell paper—they buy their paper orders. In other words, cut the price. In face of the conditions that I have shown you concerning the raw material supplies and the increasing consumption, what a silly lot of gimps and goofs we are to sit down and allow our industry to be put into the class of the non-profitable industries of the country.

What can you do to remedy this and what can I do? I'll tell you. The paper industry needs to get its merchants and its manufacturers together instead of your meeting here and passing resolutions about approaches to the manufacturers and the manufacturer going off and resoluting something else and neither one of us getting together. We should meet together to solve this problem of the future of this industry and to put it on a paying basis. It can be done. There are enough brains among the merchants and I think if we get what brains we manufacturers possess together, bent on solving these basic problems, we can rescue this paper business from its profitless plight. We must get down to a profitable basis—otherwise, we are going into bankruptcy in face of the fact that within probably a short space of ten years, there is going to come at time when the paper which you are selling today at four, five and six cents a pound, will be worth ten, twelve and fifteen cents a pound.

Don't tell me that it can't be done. I have seen print paper invoiced at sixteen cents a pound right here in this town and I'll tell you that the people who paid for it didn't have any more tremors in signing the check than if they had bought it at three cents a pound—and the consuming public bought more papers.

In fact, I think the publishers felt prouder to pay sixteen cents a pound than they did three cents.

A little three cent division of commerce,—well, it is less than the five and ten's—that's all. We are on a basis less than the five and ten cent store business. We must get our industry on a basis that appeals to a high class of men—not men of the penny business basis for remember that a penny business makes a penny man and men of penny calibre go into the penny businesses.

Post War Conditions

The dominant idea in industry immediately after the War was Mass Production. Why? To bring our cost down. What happened? We made the tonnage and we got the cost down, but we sacrificed profit.

The day has come when every merchant like every mill must say: "We'll take less orders, but we will take every order at a profit." My conception of selling and sales managership is this: Not to work for the volume of business at a lower cost, but to get the volume you can at a profit. I'll show you industries that run only sixty-five per cent of their rated capacity that make a profit and industries running at a hundred per cent that run into a loss.

It isn't incumbent upon you to take every order that comes up. If you pursue that policy, you are sure to take business at a loss. If you but knew the number of buyers that shop around for quotation only to use them to drive other mills or merchants down in price, you would be more careful in making quotations. Let me assure you that consumers, retailers, factories and converters—not to leave out merchants—all know of our ceaseless, avid desire to get volume tonnage. Consumers today will buy only what they need from week to week and will so continue until mills adjust their operations to their orders on hand and merchants refuse to sell except at a profit. The whole maze of misrepresentation and practices, malpractices, that we wouldn't like to have honest men know that we were guilty of, grow out of this senseless desire to grab tonnage.

Solution of Industry's Ills

The solution in my judgment of these ills of our industry is this: If each one of us has the grit and courage and backbone to strive as hard for a profit as we have the past seven years for tonnage, we shall speedily turn this unprofitable situation into a profitable one. You can't possibly lose on that policy. You can't lose on those goods which you buy now if you have the nerve to price them at a good living profit, and I say "you" because I understand I am talking here to merchants and not to the salesmen of the merchants. However, it has been my observation in different markets that it is not so much the fellow who represents the house or misrepresents the house as a salesman who is guilty of lost profit as it is the man who is head of the firm who hasn't the nerve to put a profitable price on the goods and say: "You take orders at that price or pass the business." If the executives of business lack the courage to set a profitable price on the paper and stick to it, how can you expect the salesman to get a profit?

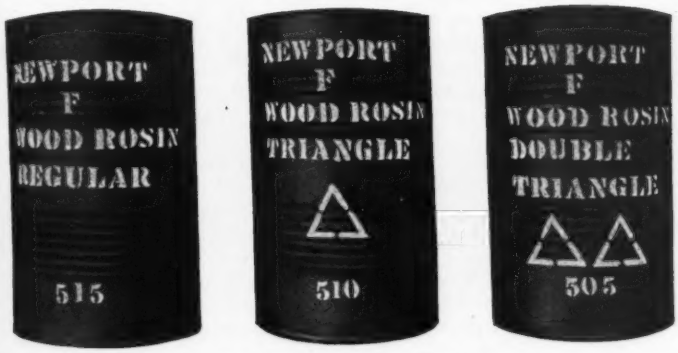
There is a fair legitimate price, with a fair, legitimate profit on all merchandise and if you can't sell for that profit, don't sell it.

It is up to you and me to work out the method by which you are going to bring back the profit to the industry. How are we going to do it? By working out profitable prices.

The profitable price—we have so much talk of price only. No other term in Commerce or industry is so frequently used. Price is merely a medium by which the cost of the commodity, plus the profit is returned. Price isn't the essential thing in business. Profit is the essential thing. Take it from me that profit is just as fundamental a factor in business as cost is, and until you are sold on the idea that your profit is an irreducible factor, that it is just as constant and must be constant in every quotation you make and that you must never deviate from it, you will not be selling at a profit.

I'm not saying this in a critical way, men. I'm pleading with you. I'm pleading with you for this reason. The paper industry is an industry which I love. I believe it is the finest, noblest industry in the world and I want to tell you that when we allow men

Selling Newport and Acme Wood Rosin in Drums Meets Buyers' Demand for Rosin on a Net Weight Basis



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In other days there was but one grade of wood rosin. Now we have several grades, each of which is admirably suited to the manufacture of various essential products.

This desirable situation is due to many years of persistent chemical research and intensive study of manufacturing needs, by a most able group of chemists working in conjunction with manufacturers who require rosin containing specific properties.

Such cooperation has succeeded in developing wood rosin to its present state of usefulness among paper makers and we are happy to note the large volume of Newport and Acme Wood Rosin that is being profitably consumed by the great paper making industry.

The cleanliness and uniformity of Newport and Acme Wood Rosin insures uniform size.

Mr. E. V. Romaine and qualified assistants are helping paper makers to a broader understanding in the beneficial use of Newport and Acme Wood Rosin.

Write any company office asking for this service, or direct to the Technical Department, North Side Bank Building, Cincinnati, Ohio.

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to go out as salesmen or representatives and we permit them to misrepresent us, they give our industry a body blow.

Capturing Confidence of Consumer

For, after all, the first thing in the development of merchandising is to capture the confidence of your consumer. When you have captured your consumer's confidence, he is going to pay you your price for the goods and you will have no trouble in convincing him of the legitimacy of your profit. But, when you go to him or you quote him a price thinking that you have got him where the hair is short and then he trots in a little competition for you and you give him a lower price, then he begins to say to you: "Well, why didn't you give me that price in the first place if you are square with me and such a good friend?" How about it? No! He finds he can't trust you; he knows he must continue to look for another paper expert for he knows another thing that we all ought to realize and that is this: That excepting the jewelry business, the paper business lends itself to deception more so than any other business. That's why there is such fear of skullduggery.

There isn't one man in a thousand who can tell me the difference in cost within perhaps forty dollars a ton in these two pieces of paper which I hold in my hand. If you men who have been in the paper business most of your lives cannot measure up closer than within forty dollars a ton for these two papers, what do you think of the average consumer that buys paper? Therefore, what is your relationship to him? That of an advisor; that of a confidence man in the highest term of the word "confidence." The purchaser must have absolute confidence in you when you tell him that the paper is worth the price you are charging him for it; and when you won't take a cent less for it and you stick by that quotation, you have won his confidence. The minute you begin to wobble and give spurious reasons and excuses of why you are going to change your price, you strike a deadly blow at that man's confidence in you and in the industry and that is why there is such an enormous turnover in the accounts on your books or on most of the merchant's books.

I have had men tell me: "I want you to give me a price for this customer—he is a friend of mine." He doesn't know that a half an hour before another man came in and told the same story and claimed his as a customer. The fellow had been on both sets of books and he was swapping from one to the other and I don't know how many other people from whom he had been buying. Look over your ledgers and find out how many people you have dealt with year in and year out over a term of five years. Those are real customers, those who have given you all of their business for five or ten years. You have solid customers there.

Divisions of Industry Should Cooperate

This isn't said to you in the spirit of criticism, but in a constructive way. I would like to see the divisions in our industry get together and become one unit. Your merchandising problems, men, are exactly the merchandising problems of the mills. There is no difference between them. These are undoubtedly our common problems.

The first thing we have to do as manufacturers is to make good merchandise. The first thing that you want to buy for your customers is good merchandise. The second thing we have to do is to persuade our trade that we have that good merchandise and the second thing you have to do with your trade is to convince them that you have the good merchandise.

The third thing to do is to make a profitable price on that good merchandise. That price should be made by the management of the house who will stick to it under every condition and adhere to it and never wabble on it,—a price that returns your cost plus your profit and when we can do that, men, I tell you that people will be looking up at the paper industry instead of looking down at it.

And finally, let me tell you this—the paper business, I am convinced, is closer to the heart of God than any other business on earth. It has to do with the sky and the earth, with snow and rain and all the elements in the whole realm of nature.

Trees of the North and South

I tell you I would like to have your chairman give me a half hour to show you the difference between choice northern fibre and the southern fibre, between a tree up here in the north and the trees of the south—these northern trees whose roots burrow away down under the earth's surface that they may in the summer time draw their substance out of the subsoils to keep them alive during six or seven months of the winter—trees of noble lineage whose roots sustain them against the raging, twisting storms which only toughens and refines their sinews that contribute to the glory of that fiber and make it clean and stout—in fact, cleaner and stronger than any other fiber on earth.

Also, by way of analogy, let me point out to you the fact that the people who have done more for civilization than all other peoples in the world are the men who live in the north temperate zone because they are provident people,—they have to look ahead. In summer they must provide for winter and in winter, they must provide for summer. So, are our trees in the north—they are provident trees and we make provident pulp from them and provident paper. I just want to say one more word.

There is a little poem that has been my constant inspiration—I hope it may be yours also. It was written by Joyce Kilmer.

"I know that I shall never see
A poem as lovely as a tree,
A tree that can in summer wear
A nest of robins in her hair,
Upon whose bosom snow has lain
Who intimately lives with rain,
A tree, whose hungry mouth is pressed
Against earth's sweet and flowing breast,
A tree, who looks to God all day
And lifts her leafy arms to pray
Poems are made by fools like me
But only God can make a tree."

And the tree is the center and the circumference of the paper industry.

Macdonald New Technical Association Secretary

Ronald G. Macdonald has been appointed as Secretary of the Technical Association of the Pulp and Paper Industry following the resignation of W. G. MacNaughton who has gone to the News Print Service Bureau.

Mr. Macdonald was graduated in chemical engineering from Massachusetts Institute of Technology in 1922 where he also took the course of chemical engineering practice. He then entered Pejepscot Paper Company, Brunswick, Maine, as an apprentice where he remained for about two years getting practical experience in all departments. He then joined the Oxford Paper Company research laboratory, Brooklyn, and after two years in this work he became connected with *Chemical and Metallurgical Engineering* of McGraw-Hill Company, in the department of advertising service where he has been until the present time.

Mr. Macdonald's training and experience in pulp and paper, as well as the industries allied to it are an excellent preparation for his present position with the Technical Association of which he has been a member since 1922.

May Have To Get Permits

Speaking recently at Orangeville, Ont., the Hon. William Finlayson, Minister of Lands and Forests for Ontario, said that the owners of timber in the provinces might be forced to secure permission from the Provincial Forester to cut any standing timber. He said the owners of limits, even the small farmer, was not prepared at present for such an act, but it would be enforced in the not far distant future. Ontario will be divided into three parts with a separate system of reforestation for each part. Mr. Finlayson urged every landowner to plant trees.

Built In—Safety!

for the Operator

for the Owner

for the Mechanism

To stop the machine after each stroke, a FRICTION BRAKE is *positively* and *silently* applied when the clutch is automatically thrown out. Because of an automatic device, the brake and clutch are NEVER partly on or partly off.

Repeating by the knife is prevented—the knife will not start without a deliberate pull on the starting lever—a SAFETY BOLT is automatically inserted after each cut.

To protect the mechanism, a SAFETY WASHER is interposed between the drive shaft and the operating parts of the machine. If from maladjustment the friction brake should fail to stop the knife bar and the Safety Bolt be brought into play, the safety washer will part and separate the knife from the driving power. Or, when overloaded from other causes, the safety washer parts and protects the mechanism. The washer can be replaced with little expense in a moment.

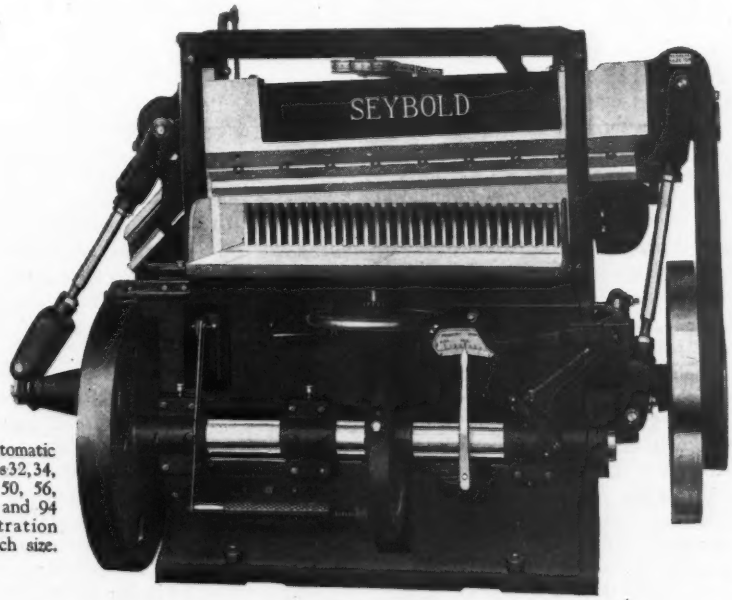
For further details and illustrative matter, write for Circular Av. 97, Av. 66, or 2040-79. For prompt attention, address

[SEYBOLD]

Harris-Seybold-Potter Company

The SEYBOLD MACHINE CO. DIV.

DAYTON, OHIO



Seybold Automatic Cutters. Sizes 32, 34, 38, 40, 44, 50, 56, 64, 74, 84, and 94 inch. Illustration shows 44 inch size.

HARRIS · SEYBOLD · POTTER

CONSTRUCTION NEWS

A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills

Construction News

Port Huron, Mich.—The Port Huron Sulphite and Paper Company, Richardson Avenue, is said to have preliminary plans under advisement for the erection of a new one-story unit at its mill, reported to cost more than $75,000, with machinery. It is understood that actual construction will be deferred until after the first of the year. E. W. Kiefer is president.

Plattsburg, N. Y.—The International Paper Company, 100 East Forty-second Street, New York, has approved plans for the construction of a new hydro-electric generating plant on the Saranac River, at a site known as Kent's Falls, about 8 miles from Plattsburg. Work will be placed under way at once. The station will be equipped for an initial output of 8,000 hp., to be increased at an early date to 12,000 hp. The power will be used for paper mill service and industrial operation in this district. The project will include the construction of a new transmission line, as well as a tie-in power line with a present plant of the International Paper Company at Cadyville, just above the new plant site; the Cadyville unit has a capacity of 3,000 hp., and was placed in service about five years ago. The entire expansion is reported to cost in excess of $250,000.

Salem, Ore.—The Oregon Pulp and Paper Company has disposed of a portion of its property, totaling about 1¼ acres, to the Portland Electric Power Company, Portland, Ore., which purposes to construct and operate an equipment storage and distributing plant at this location.

Cloquet, Minn.—The Northwestern Paper Company, Cloquet, has authorized plans for the construction of a new unit at its local mill, to provide for large increase in output, particularly in connection with kraft papers. The structure will be two and three-story, of dimensions now being determined, and is estimated to cost close to $1,000,000, with machinery. A portion of the unit will be used for a new sulphating division; the new group will comprise several smaller buildings for miscellaneous operating service. It is understood that work will be started early in the new year. The Jacobson Engineering Company, Plymouth Building, Minneapolis, Minn., is engineer.

Pittsburgh, Pa.—The Fuller Label and Box Company, 444 Dargan street, manufacturer of paper containers, etc., is considering the erection of a new addition to its plant on adjoining site, to provide for extensive advance in present output. It will be three-story, reported to cost more than $50,000, with machinery. It is understood that detailed plans will be drawn at an early date. Edwin F. Scheetz is treasurer.

Passumpsic, Vt.—The Chase Fibre Construction Company, Passumpsic, is reported to be planning the early rebuilding of the portion of its mill recently damaged by flood, with loss estimated at close to $45,000, including equipment.

Battle Creek, Mich.—The Michigan Carton Company, Battle Creek, has taken bids from a number of contractors for the erection of a proposed new plant addition, for which it is expected to begin superstructure at an early date. The structure will be two-story and basement, 145 x 309 feet, and is reported to cost more than $110,000, with equipment. Contract for reinforcing steel has been let to Joseph T. Ryerson & Son, Chicago, Ill., and Battle Creek; for steel sash to the David Lupton's Sons Company, Philadelphia, Pa. J. M. Morehouse, 343 South Dearborn street, Chicago, Ill., is architect and engineer.

Castleton-on-Hudson, N. Y.—Ingalls & Co., Inc., manufacturer of cardboard products, binders' board, etc., has completed plans for the construction of a new addition to its plant, for which general contract has been awarded to the Austin Company, 120 Broadway, New York. Work will begin at once. The unit will be one-story, with one-story boiler plant, and is reported to cost more than $50,000, with equipment. Harold R. Dean, 54 Market street, Poughkeepsie, N. Y., is architect and engineer. Edmund Ingalls heads the company.

Lindstrom, Minn.—Plans are said to be under consideration by a company, name temporarily withheld, for the construction and operation of a local plant for the production of waxed and processed papers. It is reported to cost in excess of $50,000, with equipment. The Lindstrom Commercial Club is interested in the project.

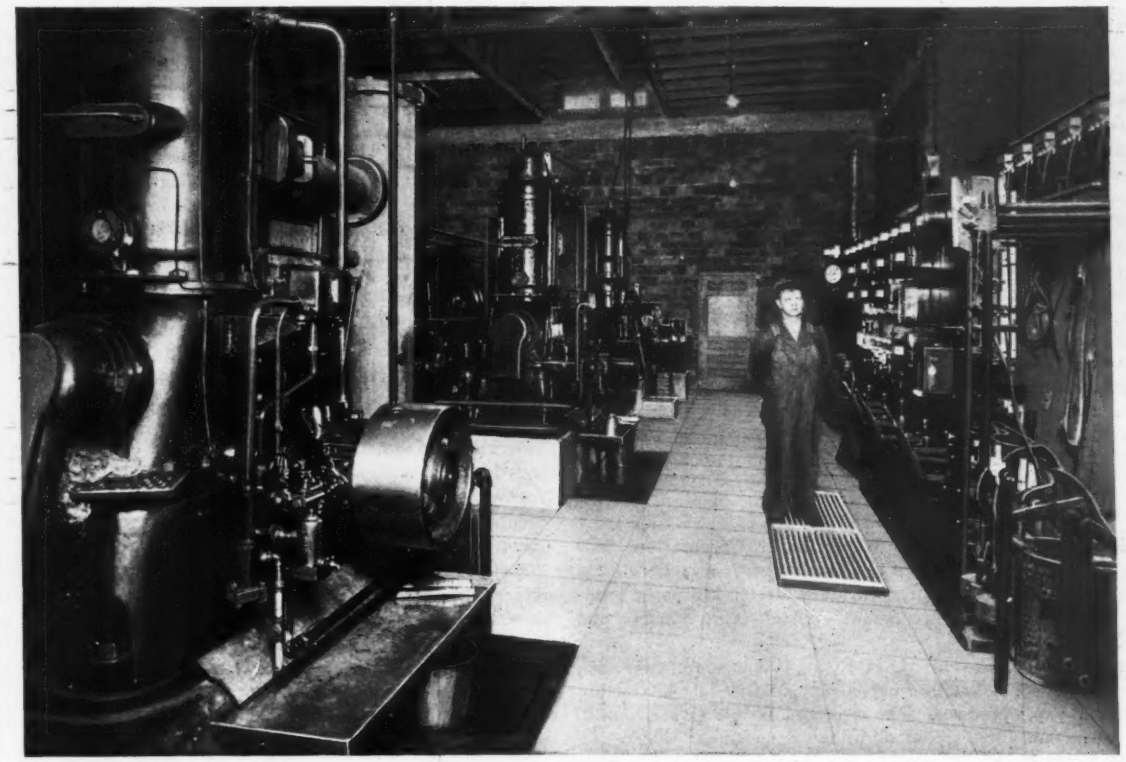
Fort Wayne, Ind.—The Fisher Brothers Paper Company, 120 West Columbia street, Fort Wayne, has authorized plans for the construction of a new addition to its plant, to be used for storage and distributing service. It will be three-story and basement, 42 x 150 ft., estimated to cost close to $50,000. It is purposed to ask bids on general contract at an early date. A. M. Strauss, Cal-Wayne Building, Fort Wayne, is architect in charge.

Olympia, Wash.—The Hamma Hamma Power and Paper Company, Olympia, Elbert M. Chandler, president, has secured permission from the state for a proposed hydroelectric power project on the Hamma River, to be used in connection with a paper mill development. The power plant will be designed for an ultimate capacity of 19,000 hp., and is reported to cost close to $500,000, including power dam and transmission system. No announcement has been made as to when the project will mature.

Chicago, Ill.—The Rockwell-Barnes Paper Company, 815 South Wabash avenue, manufacturer of paper goods, has engaged A. Epstein, 2001 West Pershing road, Chicago, mill engineer and architect, to prepare plans for proposed extensions and improvements in a two-story factory at 1511-13 West Thirty-eighth street, recently acquired. A one-story top addition, 100 x 163 ft., will be erected, and it is purposed to begin work at an early date. The company will remove its present plant to the new location and will arrange for extensive increase in capacity.

New Orleans, La.—The Werthan Bag Company, 1200 Clinton street, Nashville, Tenn., manufacturer of paper and other bags and containers, is said to be perfecting plans for the establishment of a new branch plant on local site, and will proceed with work at an early date. It will be two-story, 112 x 175 ft., located at Front and Thalia streets, and is reported to cost more than $100,000, with equipment. It will provide about 40,000 sq. ft. of manufacturing space. M. and J. Werthan head the organization.

New York, N. Y.—The Cross Paper Products Corporation, recently formed with a capital of $200,000, is said to be arranging the operation of a local plant for the manufacture of paper tubes, cartons, containers, etc. The new company is headed by R. G.



"I'm Strong for Nonpareil Diesel Oil"

Read what J. L. Prier, Superintendent of Light and Water Hugoton, Kansas, Has to Say:

"A few years ago we began using Nonpareil Diesel Oil in our three Fairbanks-Morse engines.

"No longer is it necessary to tear down our engines and clean out the carbon after short periods of operation. This, we were forced to do with other oils we have used.

"Recently, we inspected one of our Type Y, 50 H. P. engines and found very little carbon after a twelve months' run. Our large engine, a new Type Y, 120 H. P., was started on Nonpareil Diesel Oil in May, 1925. It has carried a full load twelve hours per day and as yet we have not pulled a piston, taken up a rod bearing or cleaned the carbon out of the exhaust system.

"So great is our satisfaction with Nonpareil Diesel Oil that we are afraid when the time does come to tear down our enignes, we will have forgotten how to begin."

To assist operators of Diesel Engines in obtaining the correct grades of lubricants, we offer the services of our Lubrication Engineers. These men are qualified to recommend the proper grades of oil for your use. To avail yourself of this service does not obligate you in any way.

Just phone or write our nearest branch office

STANDARD OIL COMPANY

(INDIANA)

General Offices: 910 S. Michigan Avenue CHICAGO, ILLINOIS

Rankin and J. C. and Walter E. Hoffman, 2595 Third avenue, New York.

Baltimore, Md.—L. Gordon & Son, Inc., 207 Fallway, manufacturer of paper boxes and containers, has leased property at Paca and Ostend streets, totaling about 25,000 sq. ft. of floor space, and will establish a new plant at that location. The structure will replace the former factory of the company, recently destroyed by fire, and proposed rebuilding of which will now be deferred. It is planned to install machinery at once and to begin operations at earliest date.

Portneuf, Que.—Ruberoid, Ltd., Ville Lasalle, Que., manufacturer of paper roofing, etc., has completed plans for a proposed new paper mill at Portneuf, awarding general contract for erection to M. Leduc, Donnaconna, Que. Work will proceed at once. The new mill will be one-story, reinforced concrete, 100 x 150 ft., and is estimated to cost about $150,000, with machinery. A list of equipment to be installed will be arranged at once.

Hantsport, Nova Scotia—The Avon Pulp and Paper Company has approved plans for the erection of a new mill on local site, to be one-story, 60 x 500 ft., reported to cost in excess of $350,000, with machinery. A portion of the structure will be used for a pulp division.

New Companies, Etc.

Chicago, Ill.—The Fishler Wafer Paper Corporation, 3600 South Oakley avenue, has been incorporated with a capital of 200 shares of stock, no par value, to manufacture special paper products. The incorporators are Samuel Fishler, Kurt Sommer and Paul Maca.

Los Angeles, Cal.—The H. P. Rising Paper Company, Inc., has been incorporated with a capital of $200,000, to manufacture and deal in paper products. The incorporators are C. P. Donnell, H. P. Rising and E. A. Quinn, all of Los Angeles.

New York, N. Y.—The Fiber Plastic Corporation has been incorporated with a capital of $10,000, to manufacture and deal in fiber goods, etc. The incorporators are Leo Freuder and Oswald R. Schultz, 445 Riverside Drive, New York. The last noted is one of the principal incorporators.

Attleboro, Mass.—The Attleboro Paper Products Company, Inc., has been incorporated with a capital of $100,000, to operate a local mill for the manufacture of paper products. It is expected to begin operations at an early date. James F. Cowan is president, and Joseph F. Rioux, 13 King street, Attleboro, treasurer.

St. Louis, Mo.—The Boston Wall Paper Company has been formed to manufacture and deal in paper goods. The company is headed by Charles E. Smith and S. W. Scott, both of St. Louis.

Organization Has Option on Indianapolis Site

[FROM OUR REGULAR CORRESPONDENT]

INDIANAPOLIS, Ind., November 26, 1927.—The way has been paved for bringing to Indianapolis the Deubener Shopping Bag Company, of St. Paul, Minn., according to officials of the Indinapolis Chamber of Commerce. The Indianapolis city council has just passed an ordinance approving the construction of a railroad switch to the plant of a formed tire company. The bag company had withheld acceptance because there was no railroad switch to the property. An option was taken on the site, however, while officials of the Chamber of Commerce busied themselves to secure the switch facilities. A motion in the council for a suspension of the rules made possible the immediate passage of the ordinance.

J. F. Byrne Hurt in Motor Car Accident

[FROM OUR REGULAR CORRESPONDENT]

KALAMAZOO, Mich., November 25, 1927.—J. F. Byrne, vice president and general manager of the Standard Paper Company, is confined at a hospital in Milwaukee as result of an automobile acciden in which he sustained a compound fracture of the right arm and painful cuts and bruises. His condition is not critical.

Kalamazoo Vegetable Parchment Co. Expansion

KALAMAZOO, Mich., November 26, 1927.—An expansion program requiring an outlay in excess of $1,250,000 and increasing the capacity of the plant from 225 to 300 tons daily is announced for the Kalamazoo Vegetable Parchment Company by its president, Jacob Kindleberger.

The campaign as planned and endorsed by the board of directors is to include the installation of a new machine and auxiliary equipment in mill No. 2, thus completing that unit and making possible the use of its facilities on a basis of 100 per cent; numerous changes in the present Glendale division and the erection of a fine office building.

"When our No. 2 mill was erected," said Mr. Kindleberger, "it was planned for two machines. To provide for such equipment we spent hundreds of thousands of dollars in added building space and the installation of the concrete foundations. We are now to make use of that by increase in our equipment.

"For the past nine months we have been swamped with business, producing particular lines of specialties. These specialties are papers of our own creation, worked out in our own laboratories and designed as food preservatives. The demand, after a three year experimental campaign, has now become excessive and we need a machine, designed especially for the manufacture of a particular type of paper."

The new machine will be of the fast running type, at least 165 inches wide and with forty dryers and two stacks of super-calenders. The present machine in the No. 2 mill has thirty-two dryers. It will also be necessary to add eight large beaters and three jordans to the equipment and triple the mill's bleaching capacity.

The power building is ready to receive the added power equipment, which will include two boilers, making seven in all in that unit and a large steam turbine.

In connection with this program, it will be necessary to erect a large building for the special treating of papers made on the new machine. This structure will be 90 by 300 feet in dimensions, three stories high, or 81,000 square feet of floor space. It will be of pressed brick and reinforced concrete, carrying out the splendid type of construction in effect when the mill proper was built. Some very special types of machinery will be installed in this building, and involve some highly interesting processes.

Changes at Glendale, partially and in process, include transformation of the upper floor for the use of the composing, stereotyping and advertising departments. First and second floors are to be used for special processes in oiling papers, which are designated as "food protection papers."

The office building will be a great improvement. Ground has been broken for this structure. The O. F. Miller Company has the general contract. Plans were prepared by Billingham and Cobb, Pythian building. The building will be located practically in the center of the great parchment industrial district and will make it possible to concentrate all office activities under one roof. The present main office accommodates only about one-third the force required, the balance being scattered over the plant, occupying portions of at least a half dozen buildings.

The structure will be 75 by 110 feet in dimensions, three stories, counting the basement as the first floor. It will be of pressed brick, with white stone trim, in every way a handsome and serviceable unit. The basement floor is to be used by the employment and purchasing departments. The executive offices and general counting room will occupy the main floor, while the third floor will be devoted exclusively to sales and associated branches.

While the O. F. Miller Company has the general contract, Mr. Kindleberger announces that the Kalamazoo Vegetable Parchment Co. will install the heating, ventilating and electrical equipment.

Parchment's equipment at this time and in addition to the 165 inch Bagley and Sewell fourdrinier machine, previously mentioned, includes a 164 inch Pusey and Jones and a 116 inch Horne Harper machine in Mill No. 1.

BLEACH WASHING

Then and Now

in a New York State Paper Mill

Then . . . . Using old type Washers
Now . . . . . Using an Oliver

Then Solubles in washed pulp 30 to 40 grains.
Now Solubles in washed pulp 6 to 8 grains.

Then Used 3,000,000 gallons fresh water
Now Use 2,000,000 gallons fresh water
} same tonnage.

Then Fibre loss 0.73 pounds per 1,000 gallons.
Now Fibre loss 0.07 pounds per 1,000 gallons.

Then "Hard Bleaching" cooks caused endless trouble and loss.
Now The OLIVER handles them without trouble or loss.

Then Constant attention to prevent losses.
Now The OLIVER requires, and gets, no attention.

Why not be a "NOW" mill?

Oliver Continuous Filter Co.

San Francisco
801 Cunard Bldg.

New York
1546 Aeolian Bldg.

London
11 Southampton Row, W. C. 1

Oakland, Calif.
4th & Madison Sts.

Johannesburg, So. Africa
E. L. Bateman, The Corner House

Honolulu, T. H.
W. A. Ramsay, Ltd.

PAPER AND PAPER STOCK IMPORTS AND EXPORTS OF THE UNITED STATES

For the Month Ending September 30, and for the Nine Months Ending September 30, 1927, as Compared with Corresponding Months of Previous Year

IMPORTS—PAPER

	September				Nine Months Ending September 30			
	1926		1927		1926		1927	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Paper and manufactures (total)	.....	$10,531,591	.....	$12,566,617	.....	$101,266,273	.....	$108,815,069
Printing paper—								
Standard news print ....lbs...free	279,427,043	9,328,770	337,260,143	11,149,232	2,676,728,549	89,852,501	2,884,574,250	95,323,122
Imported from—								
Finland	1,455,231	53,211	3,702,715	101,601	44,795,670	1,325,899	46,930,962	1,328,207
Germany	1,128,551	32,766	618,916	17,894	22,999,123	682,330	10,299,373	325,710
Norway	224,929	6,356	1,884,129	50,467	5,018,609	149,874	25,598,505	690,482
Sweden	5,641,135	169,008	7,664,134	214,971	57,312,790	1,748,506	101,737,471	2,925,656
Canada	251,433,468	8,435,329	287,124,368	9,587,281	2,428,678,275	82,120,099	2,584,154,819	86,269,801
Newfoundland and Labrador	19,171,105	621,661	35,952,507	1,166,270	116,836,918	3,791,433	114,765,271	3,748,984
Other countries	372,624	10,439	313,374	10,748	1,087,164	34,360	1,087,849	34,282
All other, n. e. s.....lbs...dut.	955,895	54,477	1,056,238	49,148	12,105,351	607,592	7,942,779	393,370
Grease-proof and waterproof papers..lbs...dut.	135,035	27,384	185,736	24,668	1,692,930	291,337	1,298,156	207,948
Kraft wrapping paper .....lbs...dut.	856,206	38,429	1,335,406	54,909	6,471,598	282,147	7,998,893	344,239
All other wrapping paper .....lbs...dut.	181,194	13,613	985,018	22,647	3,962,586	282,319	4,310,168	163,359
Writing, drawing, bond, etc.....lbs...dut.	424,613	100,422	313,287	73,651	2,927,723	676,770	2,597,562	654,103
Surface coated .....lbs...dut.	190,799	57,607	221,698	87,704	1,617,863	580,708	1,707,447	683,343
Tissue paper .....lbs...dut.	248,163	115,518	269,850	142,310	2,172,985	1,015,412	2,296,592	1,302,467
Pulp boards in rolls.....lbs...dut.	4,529,953	111,166	4,840,834	113,120	55,281,565	1,345,708	45,137,048	1,083,558
Other paper boards, n. e. s.....lbs...dut.	.....	54,118	.....	52,570	.....	616,946	.....	661,693
Cigarette paper, cigarette books, and covers .....lbs...dut.	583,381	140,339	832,496	238,267	6,025,879	1,574,029	11,935,521	3,514,905
Hanging paper .....lbs...dut.	197,560	41,329	75,338	38,260	2,361,736	410,798	1,744,062	466,087
Paper boxes .....lbs...dut.	144,300	70,896	206,363	135,362	1,516,648	697,489	1,769,395	997,119
Pulp or papier-mâché and manufactures of, n. e. s. .....lbs...dut.	116,205	39,325	86,329	27,810	1,526,343	311,472	1,360,358	266,420
Duplex decalcomania, not printed....lbs...free	64,541	15,867	34,971	8,012	480,306	119,001	538,218	122,080
All other .....dut.	.....	322,331	.....	348,947	.....	2,602,044	.....	2,631,256

WOOD PULP

Mechanically ground wood pulp.....tons..free	29,848	1,011,654	25,347	627,024	192,493	5,915,421	152,790	4,279,348
Sulphite wood pulp .....tons	67,710	4,446,007	73,482	4,581,927	665,726	43,870,263	654,864	42,318,216
Unbleached .....tons..free	48,224	2,866,252	47,021	2,587,757	446,495	26,235,346	415,564	23,662,501
Bleached .....tons..free	19,486	1,579,755	26,461	1,994,170	219,231	17,634,917	239,300	18,655,715
Imported from—								
Finland	6,538	393,074	5,682	270,659	43,496	2,440,137	55,711	2,919,804
Germany	4,435	294,576	2,682	194,179	64,299	4,339,525	38,512	2,768,114
Norway	3,113	252,377	5,611	414,789	51,011	4,088,063	51,774	3,906,576
Sweden	21,651	1,340,803	27,967	1,609,357	203,316	12,463,763	226,450	13,808,126
Canada	28,563	1,966,967	29,694	1,992,033	278,369	19,010,291	256,371	17,318,749
Other countries	3,410	198,210	1,846	100,910	25,235	1,528,484	26,046	1,596,847
Sulphate wood pulp, unbleached (Kraft pulp) .....tons..free	24,277	1,524,628	33,095	1,872,668	248,997	15,794,241	230,759	14,218,834
Imported from—								
Finland	1,430	85,551	1,077	53,249	19,200	1,086,555	9,059	490,991
Norway	393	24,713	2,113	108,499	8,535	553,883	8,180	461,915
Sweden	12,298	745,691	16,408	916,141	113,422	6,963,439	111,817	6,706,802
Canada	10,156	668,673	13,429	791,485	105,148	7,027,581	100,786	6,502,165
Other countries	.....	.....	68	3,294	2,692	162,783	917	56,961
Sulphate wood pulp, bleached.....tons..free	250	16,560	539	31,829	11,832	775,031	9,359	612,994
Other pulp .....tons..free	165	20,019	128	11,697	1,513	104,266	1,279	126,174

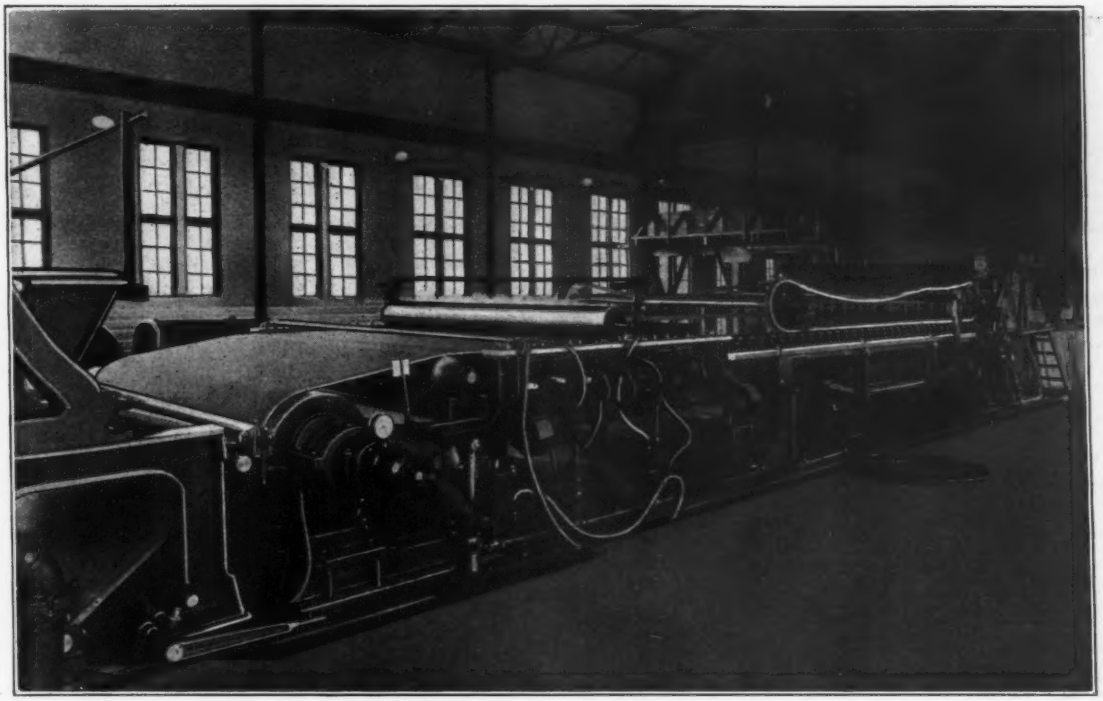
CRUDE PAPER STOCK

Rags for paper stock.....lbs...free	28,755,795	587,911	29,169,020	524,439	361,833,887	7,996,091	279,311,946	5,700,851
Waste bagging, waste paper, etc.....lbs...free	7,677,914	183,656	12,056,453	137,404	88,972,308	1,892,193	75,494,811	985,572
Old rope and all other paper stock....lbs...free	4,450,547	179,580	4,631,413	176,635	64,217,535	2,586,732	48,181,378	1,491,659

CHEMICALS AND OTHER PAPER MAKERS' MATERIALS

Colors, dyes, stains, color acids, and color bases, n. e. s.....lbs...dut.	394,720	432,420	263,401	314,084	3,857,794	4,289,019	4,096,944	4,587,841
Imported from—								
Belgium	10,489	17,932	11,399	14,344	164,410	259,681	140,539	197,689
France	10,203	14,816	13,077	14,659	131,214	172,973	133,872	154,180
Germany	126,814	145,034	104,530	128,139	1,768,066	1,863,141	2,471,444	2,616,187
Italy	13,196	16,188	6,270	6,189	68,847	74,686	70,975	85,013
Switzerland	181,847	203,478	118,970	139,170	1,480,664	1,694,070	1,078,276	1,340,845
United Kingdom	18,289	19,459	7,477	8,747	130,410	128,119	128,353	129,197
Other countries	33,882	15,513	1,678	2,836	114,183	96,349	73,485	64,733
Casein or lactarene .....lbs...dut.	1,699,615	223,385	1,105,366	160,354	22,110,280	2,362,744	20,707,311	2,637,569
Kaolin, china, and paper clay.....tons..dut.	23,313	221,156	17,640	167,092	274,400	2,713,066	228,778	2,238,942

(*Continued on page 40*)



ANOTHER INSTALLATION OF THE KEYSTONE FOURDRINIER

This Keystone Removable, Adjustable, Shakable Fourdrinier was recently installed in the new mill of the Hinde & Dauch Paper Co., of Trenton, Ontario, Canada. It has a 126" wire, 75' long and is equipped with a Kilberry Suction Couch and Suction Press Roll.

Bulletin on Request.

DOWNINGTOWN MANUFACTURING COMPANY

Paper Mill Machinery

Downingtown, Pa.

PAPER AND PAPER STOCK IMPORTS AND EXPORTS OF THE UNITED STATES

(*Continued from page 38*)

EXPORTS—PAPER

		September				Nine Months Ending September 30			
		1926		1927		1926		1927	
		Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Paper and manufactures (total)	.....	.....	$2,249,422	.....	$1,942,729	.....	$20,180,017	.....	$20,088,807
Printing paper—									
News print paper	lbs.	2,825,742	128,611	1,407,854	68,190	31,397,236	1,509,930	20,580,215	978,004
Exported to—									
Canada	lbs.	174,235	11,284	74,300	5,076	1,295,213	89,577	2,515,728	157,595
Central America	lbs.	53,982	3,014	90,494	4,337	983,738	45,005	550,742	29,381
Mexico	lbs.	63,186	4,026	33,644	1,733	816,639	43,112	559,596	25,187
Cuba	lbs.	593,551	28,626	307,492	17,641	5,774,226	257,443	4,068,756	188,874
South America	lbs.	850,735	31,675	542,706	23,705	6,246,275	281,839	5,287,469	229,397
China, Hongkong, and Kwantung	lbs.	134,655	5,795	.....	.....	7,100,418	322,623	335,824	20,629
Japan	lbs.	34,776	1,457	8,994	439	1,857,794	83,005	76,978	4,487
Philippine Islands	lbs.	837,924	36,933	177,416	7,437	5,898,579	305,829	5,955,237	245,727
Other countries	lbs.	82,698	5,801	172,808	7,822	1,424,354	81,497	1,229,885	76,727
Book paper, not coated	lbs.	1,589,341	141,075	1,443,216	120,959	12,686,956	1,228,856	11,983,086	1,039,930
Exported to—									
United Kingdom	lbs.	12,598	3,873	4,706	797	395,823	66,627	336,266	26,413
Canada	lbs.	559,024	39,254	244,435	19,542	3,121,492	272,657	2,787,533	225,425
Central America	lbs.	55,869	4,040	17,519	1,470	487,729	52,332	259,454	24,970
Mexico	lbs.	129,497	13,397	81,462	6,840	1,205,559	123,157	428,312	45,203
Cuba	lbs.	164,508	14,759	438,045	37,983	1,958,700	179,107	2,047,116	174,984
Argentina	lbs.	31,640	3,132	17,652	1,831	425,125	37,697	692,731	55,576
Other South America	lbs.	179,501	16,681	148,134	13,629	1,252,390	126,526	1,466,861	124,142
China, Hongkong, and Kwantung	lbs.	10,408	2,178	.....	.....	777,351	79,872	367,178	41,119
Philippine Islands	lbs.	279,288	20,108	212,955	16,098	1,497,518	125,698	1,594,881	123,139
Australia	lbs.	48,612	6,448	51,397	5,029	413,418	48,246	634,810	67,175
Other countries	lbs.	118,396	17,205	226,911	17,740	1,151,851	116,937	1,367,944	131,784
Cover paper	lbs.	155,271	30,467	178,845	28,198	1,055,119	191,751	1,235,298	215,192
Grease proof and waterproof paper	lbs.	159,685	27,015	239,071	41,727	1,793,547	270,134	2,038,958	296,802
Wrapping paper	lbs.	2,507,175	183,322	1,928,878	143,686	24,481,474	1,703,162	22,227,259	1,604,941
Surface coated paper	lbs.	271,974	42,813	278,372	42,553	4,699,208	585,604	4,678,033	583,551
Tissue and crêpe paper	lbs.	531,766	132,351	405,577	91,363	3,163,195	800,378	3,454,218	768,881
Toilet paper	lbs.	486,221	59,861	479,974	53,717	3,669,814	462,250	4,006,545	494,943
Paper towels and napkins	lbs.	239,455	33,333	187,636	27,833	1,508,314	218,794	1,796,806	247,872
Box board	lbs.	4,762,380	142,588	3,509,449	102,610	40,366,598	1,141,670	33,765,440	1,041,523
Bristols and bristol board	lbs.	146,980	13,984	80,899	12,987	1,171,146	133,385	1,493,630	137,861
Other paper board and straw board	lbs.	3,856,432	171,285	2,457,397	142,008	29,562,105	1,489,240	30,867,185	1,688,607
Sheathing and building paper	lbs.	781,753	32,234	693,129	25,805	8,131,523	360,253	9,523,851	378,226
Wall board of paper or pulp	sq. ft.	2,597,548	86,689	3,564,168	109,679	17,818,126	623,001	35,362,439	1,152,773
Blotting paper	lbs.	261,795	31,841	247,633	28,257	2,494,851	312,613	2,589,329	293,889
Filing folders, index cards, and other office forms	lbs.	36,398	12,243	65,009	25,114	616,366	181,424	764,739	222,934
Papeteries (fancy writing paper)	lbs.	113,385	31,914	83,028	22,883	452,800	146,307	510,865	134,148
Other writing paper	lbs.	977,675	128,974	1,118,170	136,855	7,642,944	1,220,927	9,242,263	1,379,774
Paper hangings (wall paper)	yds.	1,667,408	44,300	2,346,155	42,338	18,317,011	468,409	19,908,304	441,921
Paper bags	lbs.	790,594	74,332	930,286	85,085	8,479,351	762,695	8,959,121	767,904
Boxes and cartons	lbs.	1,719,293	124,318	1,641,998	119,084	14,923,329	1,056,154	17,645,479	1,186,499
Envelopes	lbs.	270,263	47,830	195,134	30,511	2,094,188	377,817	1,898,401	319,782
Vulcanized fiber sheets, strips, rods, and tubes	lbs.	387,129	119,083	259,739	72,931	4,302,996	1,259,920	3,291,451	980,398
Manufactures of vulcanized and indurated fiber	lbs.	21,748	8,635	25,487	9,919	375,841	118,991	427,631	113,714
Cash register and adding machine paper	lbs.	222,129	22,742	351,025	29,305	1,406,202	145,145	1,514,603	153,125
Other paper and paper products	.....	.....	377,582	.....	329,132	.....	3,411,207	.....	3,465,613

WOOD PULP AND PAPER STOCK

Sulphite wood pulp	tons	1,682	105,197	2,348	111,466	15,994	1,045,880	15,790	892,795
Soda wood pulp	tons	104	7,845	45	3,289	1,324	114,019	1,540	135,651
Other wood pulp	tons	86	3,882	436	104,148	4,679	484,401	2,292	172,830
Rags and other paper stock	lbs.	13,647,393	198,037	13,422,372	188,141	145,652,909	2,049,441	161,673,428	2,452,884

PAPER AND PULP MILL MACHINERY

Paper and pulp mill machinery	lbs.	1,417,112	230,447	1,631,442	181,666	10,319,020	2,194,020	14,976,141	2,865,776

Paper Mill Employment Increases

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 30, 1927.—There was an increase in both employment and payrolls in paper and pulp mills and the paper box industry for October as compared with September according to the Bureau of Labor Statistics, Department of Labor.

Reports were received by the Bureau from 216 paper and pulp mills who gave their September employment at 58,268 increasing in October to 58,283 an increase of less than one tenth of one per cent. The payrolls in these mills also increased from $1,500,883 in September to $1,545,105 in October an increase of 2.9 per cent.

The Bureau also received reports from 181 paper box factories who gave their September employment at 20,342 increasing in October to 21,044 an increase of 3.4 per cent. The payrolls in these factories also increased from $457,318 in September to $485,129 in October an increase of 6.1 per cent.

Cheney Bigelow Wire Works Changes Hands

[FROM OUR REGULAR CORRESPONDENT]

SPRINGFIELD, Mass., November 22, 1927.—The Cheney Bigelow Wire Works, manufacturers of dandy rolls, fourdrinier wires and wire cloth passed into new hands last week, Bruce Pirnie and associates obtaining control. Leroy E. Bartlett, who started in as office boy 30 years ago, was elected president, to succeed Andrew J. Tucker, and Bruce Pirnie was elected chairman of the board of directors, a new office.

OXFORD
PAPER COMPANY

PAPERS OF SUPERIOR QUALITY

OXFORD SUPER CALENDERED BOOK

OXFORD ENGLISH FINISH BOOK

OXFORD LITHOGRAPH

OXFORD TABLET

OXFORD POLAR COATED

OXFORD NORTH STAR COATED

OXFORD DULL FINISH COATED

OXFORD FOLDING COATED

EXECUTIVE OFFICES
200 FIFTH AVENUE
NEW YORK

New York Trade Jottings

Arthur N. Waring, distributor of paper and paper products, is now located at 52 Vanderbilt avenue, New York. Telephone, Murray Hill 2331.

* * *

The annual meeting of the American Institute of Weights and Measures is to be held in the rooms of the institute, 115 Broadway, New York, at 2:30 p. m., Thursday, December 8.

* * *

Einar Nystrom, consulting engineer, of Helsingfors, Finland, who has been visiting pulp mills in Canada and United States for several weeks, was a New York visitor last week.

* * *

There was an excellent attendance of members at the regular meeting and luncheon of the New York Section of the Salesmen's Association of the Paper Industry, at the Canadian Club, last Monday.

* * *

Paul F. Hanway represented the American Paper and Pulp Association on Tuesday, November 29, at the Cosmos Club, Washington, D. C., when a committee meeting was held on "The Classification and Definitions of Paper Terms."

* * *

R. Canovai & Sons, Inc., of 27 Cleveland Place, New York, announce that Anthony Robilotta, formerly with M. M. Elish & Co., is now affiliated with their organization in the capacity of manager. He is in complete charge of the domestic and foreign departments.

* * *

The Union Bag and Paper Company, New York, announces a new grocery bag, to be known as "Rhinokraft" in the automatic, self-opening shape and "Stronghold" in the square shape. The organization will be able to fill orders for these new grades on or about January 1.

* * *

D. A. Crocker, of the American Paper and Pulp Association, will take the place of O. M. Porter at the annual meeting of the Gummed Tape Association on December 8, at the Hotel Statler, Buffalo, N. Y. Mr. Porter will attend the executive meeting of the American Waxed Paper Association, which takes place the same day at the Hotel Commodore, New York.

Paper Made From Rushes Planned in Argentina

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 23, 1927.—Exclusive right to make paper from bulrushes is sought in a petition to the Argentine Ministry of Agriculture, reports Assistant Trade Commissioner Mason F. Ford, Buenos Aires, to the Department of Commerce.

The petitioner claims that experiments already conducted with rushes from the banks of the Plate, Parana, Uruguay, Pilcomayo and Bermejo show that the plant contains much cellulose which may be extracted at low cost.

Government aid is being sought to assist in the new project.

Replica of Stettler Plant Exhibited

[FROM OUR REGULAR CORRESPONDENT]

PORTLAND, Ore., November 26, 1927.—The F. C. Stettler Company, Portland, exhibited at the Pacific International Stock Show recently a replica of their plant constructed of card board and wall board, with all details complete. Trucks operated by electricity were in action going into the garage entrance of the plant and out loaded with paper and boxes. The company also distributed post cards bearing a picture of the plant for mailing as souvenirs, to visitors calling at their booth.

Paper Associations Exchange Statistics

The American Paper and Pulp Association is actively cooperating through the exchange of statistics and other measures with the Southern Kraft Association and the Paperboard Industries Association. In each case it has been found that there are many items of mutual interest and value which are common to the other two associations as well as the American Paper and Pulp Association, and as a result the material now being received by the American Paper and Pulp Association is much more complete than heretofore and in addition, the other associations above mentioned are receiving from the American Paper and Pulp Association data which is in a measure some guide to them in their operations.

Arrangements have been made with the Survey of Current Business at Washington and the Paperboard Industreis Association whereby the American Paper and Pulp Association will receive each month from those two groups the data in total as received by them from the paper board mills and in addition, the American Paper and Pulp Association will attempt to receive from some fifty other paper board mills their monthly production, shipments, stock and paper stock figures which in turn will be totaled and added to the figures as received from the Survey of Current Business and the Paperboard Industries Assn. and the complete total for the industry published.

For those mills which are cooperating in this measure with the American Paper and Pulp Association there is being arranged an exchange agreement without any obligation attached thereto whereby such mills will receive in exchange for their mill figures the totals as reported for the industry. This in itself should prove very helpful towards the stabilization of the board industry particularly since the industry will be better equipped to handle its affairs by a more complete picture of current statistics than it has had heretofore.

This cooperation combined with that of the Survey of Current Business and the Paperboard Industries Association is a step along the lines of progressive work being established by the Association.

New Mill To Produce Paper From Sabai Grass

WASHINGTON, D. C., November 30, 1927.—Foundation stone of new paper mill which is to use sabai or bhabbar grass as raw material has been laid, say advices from Consul E. Verne Richardson, Karachi, India, made public by the Department of Commerce.

When completed the mill will be one of the most modern in the East, it is said. Orders have already been placed for its paper. Initial production capacity will be 7,000 tons of white printing and writing papers and 500 tons of wrappers yearly.

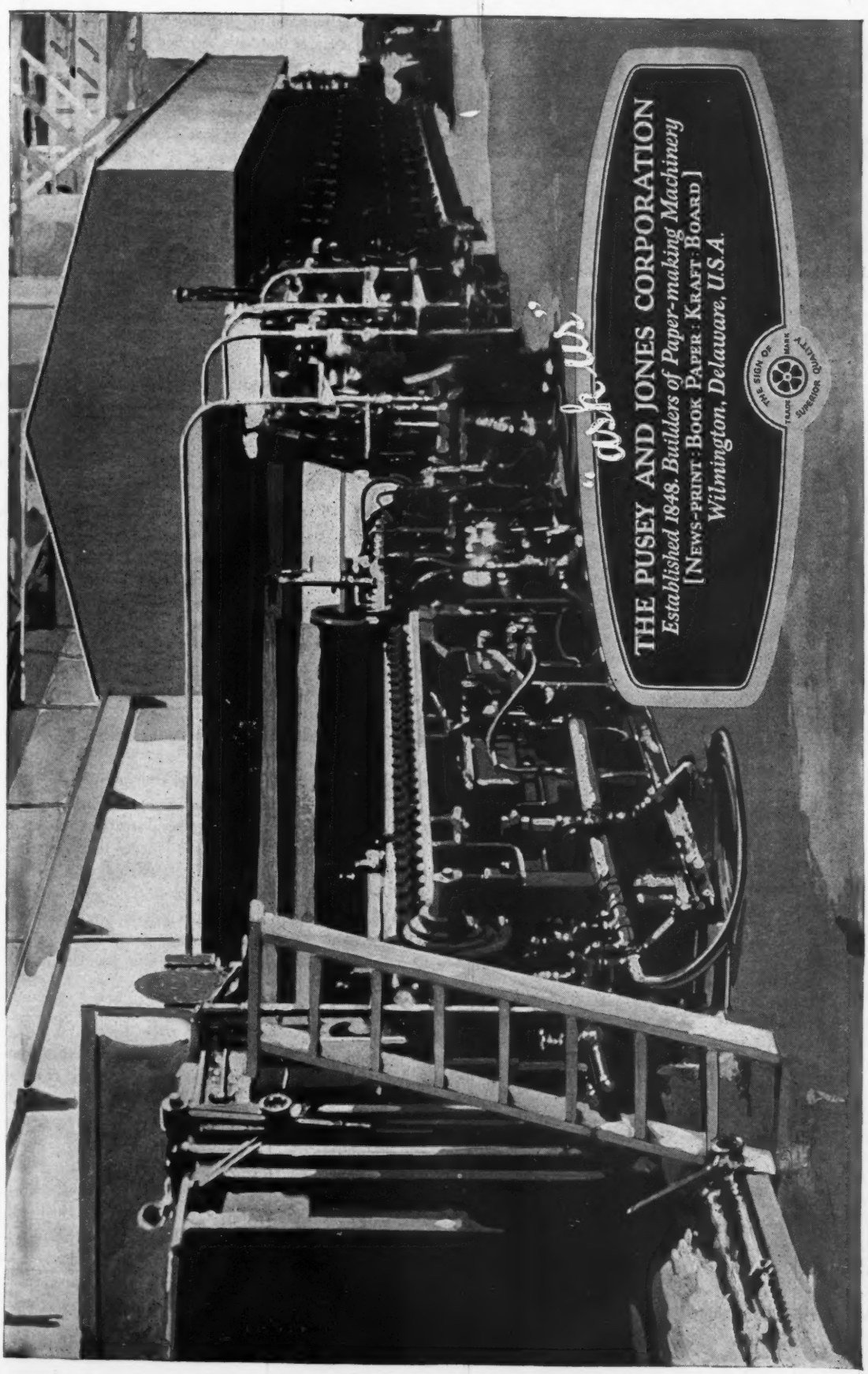
Equipment of the mill will include the most modern machinery for paper making, electric drive, electrolytic plant for bleach and caustic, lime calciming plant, soda recovery house and storage for raw material.

Authorized capital of the company backing the mill is placed at 5,000,000 rupees or about $1,650,000 ordinary shares and 3,000,000 rupees or about $1,000,000 debentures, the latter to be issued as required.

The new mill is located near Saharanpur on the banks of the Western Jumna Canal and adjacent to a station on the Northwestern Railway. Sabai grass and straw may be procured not more than twenty to thirty miles away. Plenty of water can be obtained from the canal free, in accordance with an arrangement with the Punjab Government.

W. A. Dewsnap Dies Suddenly

LONDON, England, November 15, 1927.—William Alexander Dewsnap, director of Davies & Royle, Ltd., the well known paper agents, of 7 Old Swan Lane, London, died suddenly early this morning from double pneumonia. Services were held at St. Saviours Church, Brockley Rise, Forest Hill. Interment at Ladywell Cemetery.


THE PUSEY AND JONES CORPORATION
Established 1848. Builders of Paper-making Machinery
[News-print · Book Paper · Kraft · Board]
Wilmington, Delaware, U.S.A.
THE SIGN OF TRADE MARK QUALITY SUPERIOR

Illustrating one of the two 168-inch Bond Paper Machines, designed and built in 1926 by The Pusey and Jones Corporation for Fraser Paper, Limited, Madawaska, Maine

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PAPER TRADE JOURNAL
ESTABLISHED 1872

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Vol. LXXXV New York, December 1, 1927 No. 22

BUSINESS AUTHORITIES REASSURING

Business authorities have taken a distinctly reassuring attitude with respect to the future, according to Henry Clews & Co.'s weekly Financial Review. One of the principal factors in the motor trade foreshadows a very active year's business during 1928, and a similar point of view has been expressed by a number of bankers, notwithstanding some divergence in trends between different branches of trade. Commodity markets are, however, gaining in firmness and prices have shown a tendency to strengthen which reflects a considerably bettered condition of demand. The improvement in steel and iron has continued actively. Production is increasing and sales are better. Prices, while they have not yet shown the effect of the improved conditions in any pronounced way, are nevertheless rather more favorable in a number of branches of the trade. The definite announcement that the new Ford car will be on sale within a few days has tended to eliminate some uncertainties from the automobile trade and will probably be followed by a release of orders which, it is believed by authorities, have been held back pending the time when more would be known about the new Ford output. With general holiday trade already beginning in good volume, there should be no doubt of satisfactory business returns in the entire distributive field, which should react favorably upon manufacturing and other enterprises. Accordingly reports for the fourth quarter of 1927 are now promising decidedly better than was true during the preceding three months.

While it remains true that the total amount of stocks that are being carried on credit is very large, and while the brokers loan item is consequently one that must continue to be carefully watched, the market is disposed nevertheless to disregard it in large measure for the time being. Easy money conditions and the fact that the Treasury is now expected to make, contrary to earlier predictions, a small issue of certificates of indebtedness in mid-December, tend to maintain confidence in the continuance of practically the existing situation during the last weeks of the year. The general condition of confidence is likely to be sustained by extra dividends in at least a scattering of cases, while some of the factors which often disturb money condidtions at the close of the year, particularly selling for income tax account, will probably be of less significance this year than usual.

Temporary reactions and unsettlements have not been surprising in view of the advances that have occurred during the recent past. The condition of the market is such that frequent up and down movements involving readjustments of values, are now to be expected. In many cases, they are likely to be fairly sharp, although they by no means imply that prompt recovery may not occur. Indeed, the prevailing feeling in the market is distinctly hopeful, although the buying is still of a highly selective character, and is likely to continue so. While confident predictions are made with reference to what may or will happen after the turn of the year, traders are disposed to wait for definite information on that subject before making very much broader commitments. There is a possibility that Congress may attempt to tax corporate surpluses and, should any such effort be made, extra dividends either in cash or stock might be expected in sundry cases. This tends to sustain the upward movement of a few favorites but it is not a general factor and decision with reference to the outlook for the list as a whole must be reached independent of such special factors. Conservatism in commitments is thus the indicated policy.

ACTIVITIES OF CONCILIATION SERVICE

In discussing the work of the Conciliation Service during the past year the Secretary of Labor, James J. Davis, said that the records of the Conciliation Service for the fiscal year 1927 show that 545 trade disputes were handled by the representatives of this service. Of this number, 24 cases were pending at the close of the year; 395 cases (plus 41 from the preceding fiscal year) were adjusted; 69 cases were closed without assistance from the commissioners, or were called off or settled with the assistance of local or State agencies; and 57 disputes are listed as "unable to adjust."

The cases presented for settlement during the year directly or indirectly affected 575,723 workers.

Official experience shows that in approximately 85 per cent of the cases submitted to the Conciliation Service for mediatory counsel, satisfactory settlements have been secured, and this has been accomplished under the theory and practice that commissioners of conciliation have no power to compel contesting parties to accept mediation. Neither have they authority to make awards or decide issues in dispute. Their duties are, rather, to negotiate, advise, and counsel with management and men, with the view to brining about industrial peace upon the best possible basis for all concerned.

Our experience has proved, said Secretary Davis, that American employers and employees are not favorable to the principle of compulsory arbitration in labor disputes. In fact, there is a general reluctance among our people to setting up any machinery which would have arbitrary power to prescribe an iron-clad basis for the settlement of any differences between employers and workers; and they, themselves, are in most cases opposed to surrendering their rights and authority to a third party in matters which should be a matter of arrangement between themselves. Neither legal enactment nor compulsion seems to be practicable and proper as a means of bringing about industrial peace. The remedy lies not in governmental or other interference between employer and employee, but, rather, in direct negotiation and mutual understanding. This objection, however, does not apply to voluntary

arbitration when both parties, in the beginning, have agreed upon the form and the methods to be used in arbitrating their differences, and that they will accept as binding the opinion or conclusion of an arbitration board, made up in accordance and functioning in accordance with their mutual wishes at the time they agree upon such a plan as a satisfactory approach to settlement.

First Ohio Safety Congress Successful

MIDDLETOWN, Ohio, November 26, 1927.—The First Annual All-Ohio Safety Congress, which was held in Columbus recently, was a great success. Over 1500 persons attended the sessions, and plans were made for holding a similar meeting in November 1928. The slogan for Ohio industries, adopted at the Congress is, "A Twenty-five per cent Reduction in Accidents in 1928." This reduction can be accomplished if every industry in Ohio will do its part in accident prevention work.

The Paper and Pulp Section had a fine meeting; twenty companies being represented. Roland Jones, president of the Surty Manufacturing Company, of Chicago, spoke on "The Part Standard Guarding Plays in Accident Prevention." W. J. Peacock, personnel director, the Northern Paper Mills, Green Bay, Wis., spoke on "The Other Seventy-five percent." Mr. Jones showed how the lack of standard guarding is responsible for about 25 per cent of all accidents in industry. Mr. Peacock told of the 75 per cent of accidents caused by carelessness, proving that by organization and education this amount can be greatly reduced.

A permanent organization of the Paper and Pulp Section was effected for the purpose of carrying on the campaign of accident prevention in the paper industry of Ohio. The officers of this section are: Chairman, Kenneth L. Faist, Champion Coated Paper Company, Hamilton; Vice-Chairman, Harry E. Hiers, Ohio Boxboard Company, Rittman; Secretary, D. D. Thirkield, Sorg-Oglesby-Smith Paper Company, Middletown.

A Safety Contest, based upon the rules of the Paper and Pulp Section Contest of the National Safety Council, will be held in Ohio next year. All paper and pulp mills in Ohio will be eligible. Ernest Augustus, Mead Pulp and Paper Company, Chillicothe, is the chairman of the contest committee. A safety rally of Ohio paper and pulp mills will be held in Hamilton early in 1928.

Bids for Government Paper

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 30, 1927.—The Government Printing Office has received the following bids for 33,210 pounds of various sizes sulphite manila tag board, high finish: The Whitaker Paper Company, at 6.24 cents per pound; Barton, Duer and Koch Paper Company, 7.57 cents; Mathers-Lamm Paper Company, 8.5 cents; T. A. Cantwell & Co., Inc., 7.75 cents; Virginia Paper Company, 7.696 cents; Reese & Reese, 6.65 and 8.15 and 8.65 cents; Port Huron Sulphite and Paper Company, 6.96 cents; Thomas Barrett & Co., 6.75 cents; and R. P. Andrews Paper Company, 7.59 cents.

For 530 pounds of 26 x 42 inch white rope drumhead paper: Virginia Paper Company, at 25 cents per pound; R. P. Andrews Paper Company, 22 cents; Whitaker Paper Company, 20.91 cents; Barton, Duer and Koch Paper Company, 21 cents; and Mathers-Lamm Paper Company, 25 cents.

The following bids have also been received for 230 pounds of 21 x 24 inch sensitized paper: Ditto, Inc., at $33.67; Nashua Gummed and Coated Paper Company, $72.00; R. P. Andrews Paper Company, $82.20; and Mathers-Lamm Paper Company, $72.80.

For 160 pounds 38 x 50 inch golden red coated paper: Virginia Paper Company, at 15 cents per pound; Whitaker Paper Company, 15 cents; Polygraphic Company of America, 25 cents; and R. P. Andrews Paper Company, 15.5 cents.

Boston Paper Market Fairly Firm

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass. November 28, 1927—Fairly firm is the condition of the paper market, although the generally unseasonable weather has influenced the demand to a certain extent. Retailers in all lines of business have been affected somewhat by the mild weather. Some of the paper dealers report that the market has no animation. It had been felt that September, October and November would be big months but they have not proved so, but some expect business in December which usually develops earlier. Paper firms usually plan in July and August for the fall of the year by purchasing supplies. In some cases prices of paper have dropped and the wholesalers, at least in some instances, have an undesirably large supply on hand. The coming Presidential election makes some pursue a conservative policy, not only in paper but in other lines.

Kraft has declined a fraction of a cent. The No. 1 grade is now quotable at .05½ @ .06½ compared with a former range of .05¾ @.06½, and the No. 2 grade is at .04¼ @ .05½ against a previous range of .4¾ to .05¾. One of the mills in the South had a large amount on hand which it was desirable to move and this condition made prices lower. The situation is regarded as only temorary.

In boxboard, the market is fairly steady. Most of the box factories are very busy on Christmas business and are expected to come into the market before long. At present, however, the orders are on a hand-to-mouth basis only.

Paper stock prices continue at the same levels. It is not expected that there will be any material change before January 1, or around the contracting period.

There is not a very large demand for bagging, especially that used for covering cloth. A small crop is looked for next year and there is a substantial carry-over of bagging for cotton covering purposes. This condition naturally lessens the demand for stock for re-weaving into bagging. The trade will know more definitely about this condition in another month as to the way prices are going. According to one of the trade, "somebody always upset market calculations by bidding too high."

Among the grades which have declined are foreign gunny, now quotable at 1.65 as compared with a former price of 1.75, domestic gunny at 1.70 @ 1.80 compared with 1.75 @ 1.85, and scrap burlap at 1.37½ @ 1.50 compared with a farmer range of 1.50 to 1.62¼.

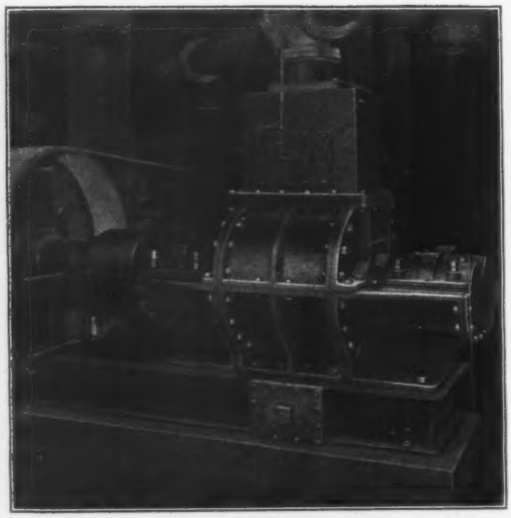
New and old domestic rags remain steady at the same prices. Foreign rags are likewise firm at current quotations. A 100-ton lot of dark cotton sold during the week at 1.65.

Michigan Paper Co. Bonds Offered

[FROM OUR REGULAR CORRESPONDENT]

KALAMAZOO, Mich., November 25, 1927.—First mortgage bonds of the Michigan Paper Company to the amount of $300,000, secured by liens on the company's properties in Kalmazoo and Plainwell, were offered Monday by the First National Bank and Olmstead and Mulhall. These bonds, bearing 6 per cent interest and dated October 1, 1927 and will mature serially October 1, 1930 to October 1, 1941. Funds derived from the sale are to be used in paying part for the plant of the Bradford Paper Company, now operated as the coating plant of the Michigan Paper Company, also for certain improvements that are to be made on the mills at Plainwell.

Michigan Paper has an output of 65 tons of paper daily in its Plainwell mills and 29 tons daily minimum of coated paper from its Kalamazoo mill. Ernst and Ernst audit places the assets at $1,609,989.40, while on the basis of a complete appraisal, made by the Lloyd-Thomas Company, of all real estate and equipment holdings, these assets are increased to $2,320,646.22 or $7.700 security for each $1,000 bond.



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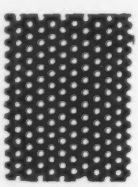

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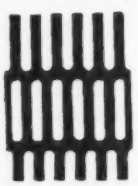

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AN ORGANIZATION FOR THE ENCOURAGEMENT OF ORIGINAL INVESTIGATION AND RESEARCH WORK IN MILL ENGINEERING AND THE CHEMISTRY OF PAPER, CELLULOSE AND PAPER-MAKING FIBERS GENERALLY; IT AIMS TO PROVIDE MEANS FOR THE INTERCHANGE OF IDEAS AMONG ITS MEMBERS IN ORDER THAT PROCESSES OF MANUFACTURE MAY BE MADE MORE EFFICIENT AND IMPROVED ALONG TECHNICAL LINES.

Conducted by W. G. MacNAUGHTON, Secretary

A Modified Method For Determination of the Copper Number of Paper*

By B. W. Scribner and W. R. Brode

By the term, copper number, as applied to the examination of celluloses is meant the amount of copper reduced from Fehling solution by a given amount of cellulose material. This determination,[1] commonly used in the examination of celluloses to find their content of oxidation products and other degraded celluloses, such modified celluloses having abnormally high copper values, is applied to paper to find its probable resistance to chemical deterioration, as the oxycelluloses and other modified celluloses are less permanent than pure cellulose and tend to induce deterioration of the paper fiber. Such determination is also of assistance in controlling paper-making processes so as to minimize the effect of them in respect to chemical degradation of the cellulose of the fibrous raw material.

When the cellulose material is treated with Fehling solution, the copper sulphate of the latter is quantitatively reduced by the degraded celluloses to cuprous oxide. The amount of cuprous oxide so produced is conveniently measured by first using it to reduce a molybdophosphoric solution. The amount of reduced molybdenum solution is then determined by oxidizing it with potassium permanganate. The molybdate titration method is preferred as the color imparted by the molybdenum provides an excellent end point, both in the titration itself and in the washing of the precipitated cuprous oxide.

Studies made at the Swedish Government Testing Institute showed that the folding endurance of paper and its copper number are closely related. When papers were subjected to a heat treatment, which was used as an accelerated aging test, those which had the highest copper number showed the greatest deterioration in folding endurance as a result of heating.[2] A limited number of tests made at the Bureau of Standards gave results which showed the same tendency. A number of samples of a particular commercial rag-fiber bond paper were tested and their folding values were found to be consistently in inverse proportion to their copper values. It appears that determination of copper number is of direct practical value and should be of service not only for testing the quality of paper, but as a part of the control procedure in the paper mill for maintaining satisfactory quality in the paper produced.

The method described below for the determination is patterned after the methods of Gault and Mukerji,[3] and Staud and Gray.[4] A stronger solution of potassium permanganate than that used by the first authors has been used in the following method: In the first method from 200 to 600 ml. of potassium permanganate solution were required for a good quality paper, whereas in the following method a high-grade paper requires less than 10 ml. Gault and Mukerji obtained quite consistent results by a 15-minute treatment at the boiling temperature of the solution. Staud and Gray, on the other hand, have presented data to show that the reaction is not completed until nearly 30 minutes of treatment at this temperature, they, themselves, using 45 minutes as the reaction period. In the method described in this paper 30 minutes was found to give quite consistent results which did not vary greatly by longer treatment. Reduction of the test specimen to a finely divided condition is considered essential in reducing the time of treatment and producing complete reaction.

The method is particularly adapted to testing high-grade rag-fiber bond papers. Such papers are usually internally sized with rosin, surface sized with animal glue and pressed very hard in the finishing process. Owing to their hardness and toughness they are very resistant to the usual procedure employed for this determination but very accurate test results are obtained by the modifications described.

Preparation of the Paper Sample

In testing high-grade rag-fiber bond papers, because of the heavy glue surface sizing and the hard finish, it was found impossible to obtain accurate results which could be duplicated when a sheet of the paper was used or even if the paper were cut into very small fragments, although in the latter case much more uniform results were secured than in the former case. Uniform and accurate results were obtained only when the paper specimens were finely ground. The paper when ground had the appearance of finely cut cotton and was extremely well adapted to chemical treatment and washing. While such treatment may not be necessary in the case of soft, weak papers it is believed that grinding of the paper for this determination should be made standard procedure. In fact, such preparation of the paper is highly desirable for most chemical tests of paper which depend on extraction of the paper by liquid solvents, as paper fibers hold absorbed substances tenaciously.

The grinder used for this purpose was constructed similar to one

* Technologic Paper of the Bureau of Standards, No. 354.
[1] Originally proposed by Schwalbe, Die Chemie der Cellulose, p. 625; 1912.
[2] "Permanence of paper" Gösta Hall, Paper Trade J., 82 No. 14, Apr. 8, 1926; Tech. Asoc. Papers, 9 (1926).
[3] Comp. rend., 178, p. 711, 1924.
[4] Ind. and Eng. Chem., 17, p. 741, 1925.

used at the Swedish Government Testing Institute by Gösta Hall[5] and was designed by him. It consists of a 12-inch rotor fitted with six serrated steel lugs, which revolves inside a steel housing, the inner surface of which is also serrated around its circumference. The rotor teeth clear the stator teeth by a sixteenth of an inch. The rotor is driven at the rate of 1,700 revolutions per minute which gives the rotor teeth a speed of a little over a mile per minute. The dry paper is introduced in the form of strips through a slot and enters the rotor space near the center whence it is carried by centrifugal force into the space between the rotor teeth and the stator teeth. It is here disintegrated by impact and is ejected through a 7-mesh screen into a receiver in the base of the apparatus. Disintegration in this manner does not heat the paper, a consideration of much importance.

The advantage of using ground-paper samples instead of cut pieces is easily demonstrated by the molybdate method of titration. It is nearly impossible to remove all of the blue color of molybdenum from cut pieces, especially if the paper is heavily sized, whereas this washing process is accomplished with ease on the ground paper. The failure to remove all of the blue molybdenum in the washing process is a source of error which reduces the copper number. The blue color of the molybdenum is so intense as to afford a very good indication as to when the sample has been washed sufficiently, and for this reason is to be preferred to the iron solution commonly used.

Preparation of the Solution

1. Copper Sulphate (Fehling Solution A).—To 4 liters of distilled water are added 277.3 g. of copper sulphate ($CuSO_4 5H_2O$) and the mixture is shaken at intervals until the copper sulphate has gone into solution. The copper sulphate should be of high purity and as free from iron as possible.

2. Alkaline Tartrate (Fehling Solution B).—One hundred and fifty grams of sodium hydroxide of good quality and 500 g. of sodium potassium tartrate are dissolved in 1,500 ml. of distilled water.

3. Fehling Solution.—Fehling solution is prepared by the careful addition of the copper sulphate solution (A) to an equal amount of the alkaline tartrate solution (B). It may be kept ready mixed, but should in this case be carefully protected from r and light, as it is apt to undergo changes which render its in-cations unreliable. Before using a mixed solution which has stood for some time, a small amount should be diluted and heated to boiling for a few minutes. A perfectly clear solution indicates that the solution is still satisfactory for use. It is, however, preferable to keep the two solutions separate until they are needed.

4. Molybdophosphoric Solution.—Dissolve 100 g. of sodium molybdate (43 per cent Mo) and 75 ml. of phosphoric acid (83 per cent) in a solution containing 275 ml. concentrated sulphuric acid and 1,750 ml. of distilled water.

5. Potassium Permanganate Solution.—Dissolve 6.25 g. of potassium permanganate in 1 liter of distilled water, filter through an asbestos mat in a Gooch crucible, and dilute to a total volume of 4 liters.

Standardization of the Solution

The standardization is done according to the directions given in circular No. 40 of the Bureau of Standards,[6] with certain modifications due to the difference in the strength of the potassium permanganate solution. In a 400 ml. beaker dissolve 1.5 to 2.0 g. of sodium oxalate in 150 to 200 ml. of hot water, 80 to 90 degrees C., and add to this solution 6.5 ml. of sulphuric acid (1:1). Titrate at once with the permanganate solution, stirring the liquid vigorously and continuously. The permanganate solution must be added slowly, not more than 10 to 15 ml. per minute, and the last 0.5 to 1.0 ml. must be added drop by drop with particular care to allow each drop to be fully decolorized before the next is added. The temperature of the solution at the end should not be below 60 degrees C.

Procedure

Determinations are always carried out in duplicate and if possible in triplicate, the final figure being an average of these separate values.

One and a half grams of the ground-paper sample are added to a solution of the following composition, after a temperature of 100 degrees C. has been reached: 25 ml. of copper sulphate solution, 25 ml. of tartrate solution, and 125 ml. of hot distilled water. This mixture is heated with gentle stirring in a 500 ml. wide-mouth Erlenmeyer flask in a water bath containing 30 per cent calcium chloride. The temperature of this bath is maintained at about 110 to 115 degrees C. so as to keep the liquid in the flask at a gentle boil during the time it is being treated. The temperature of the copper solution should not go below 100 degrees C. during the period of treatment, which should be approximately 30 minutes.

The solution is then filtered while hot on a 5.5 cm. filter paper[7] in a Büchner funnel and washed with 250 ml. of hot water. The paper fiber and the filter paper are then transferred to a 250 ml. beaker and 25 ml. of the molybdate solution added. After allowing the mixture to stand for a short time 25 ml. of water are added and the mixture stirred so as to disintegrate the filter paper. The solution is then filtered as before and washed with about 200 ml. of cold water. This washing must be done thoroughly so as to remove all of the blue molybdenum color.

The blue solution is now titrated with the standard permanganate solution until a permanent pink is obtained. The titration can be carried out accurately without danger of adding an excess of permanganate since the blue solution changes to colorless just before it goes to pink and thus gives a definite warning of the approaching end point.

Calculation of Results

The copper number of the sample is determined by multiplying the number of milliliters of potassium permanganate used in the molybdenum titration by the calculated factor and dividing the result by the number of grams of sample used. The copper number may thus be defined as the number of centigrams of metallic copper in the cuprous oxide reduced from the cupric sulphate by 1 g. of sample. The factor, which is dependent on the exact titer of the potassium permanganate solution, is the number of centigrams of copper, in the cuprous oxide, equivalent in reducing power to the oxidizing power of 1 ml. of the potassium permanganate solution.

For example, the factor of a potassium permanganate solution is 0.2714; that is, 1 ml. $KMnO_4 = 0.2714$ cg. Cu. In an analysis, using 1.5 g. of sample, 5 ml. of potassium permanganate solution are required in the titration. The copper number of the sample is calculated as follows:

$$\frac{\text{ml } KMnO_4 \times \text{factor}}{\text{grams of sample}} = \frac{5.0 \times 0.2714}{1.5} = 0.9046$$

or the copper number of the sample.

De Zurik Knot Saw

A handy machine for removing knots and other defects from pulp wood has been developed by D. De Zurik, Sartell, Minn., who also builds the De Zurik nozzle shower.

The knot saw is a combination of a sawing and chiseling device with a dado saw, the mandril of which is direct connected to a 5 horse power motor. The floor space required is but 3 x 8 feet.

As the dirt in wood pulp is traceable finally to the wood, the logical method of attack is to clean the wood of black knots, pitch pockets, ingrowing bark and other defects, rather than to attempt to clean the pulp after it is ground or digested.

[5] "Acidity in paper," by S. Kohler, in charge of paper section, Government Testing Institute, Stockholm, Sweden, and G. Hall, chemist, Albemarle Paper Manufacturing Co., Richmond, Va. Paper Ind. 7, No. 7, Oct., 1925.

[6] Government Printing Office, Washington, D. C., 5 cents each.

[7] A No. 40 Whatman filter paper gave good results.

"Burnt" Cooks

Some Factors Influencing the Blackening of Sulphite During Digestion

By W. H. Birchard, The Scutan Co., Brooklyn, N. Y.

Every digester operator at some time in his career has had the unfortunate experience of having a cook burn on him or discolor in a very few minutes, causing either a total loss of the stock or a greatly weakened stock having a high bleach consumption. The operator must be continually watchful in order to guard against such occurrences. The blackening of cooks is more prevalent in some mills than others due to the cooking procedure.

No specific can be prescribed that will cure the ills of all mills because there is such a diversity of operating practice throughout the country. An exposition of some of the main factors causing the discoloration and burning of cooks however, will help operators to remove or partly remove the factors causing the trouble. The terms "discoloration" and "burning of cooks" are both used because the stock in the digester may be discolored without appreciably weakening the stock whereas under other conditions the fibres are not only materially weakened through degradation but discolored. Where stocks are to be bleached the discolored stock will also become weak due to the drastic action of the bleaching solution necessary to give a respectable color. Of course it is impossible to remove entirely the causes of discoloration but a knowledge of what causes the difficulty will help to prevent it.

From a study of the literature it will be noticed that this has always been a problem in sulphite manufacture. Tilghman in his first endeavor to manufacture a chemical pulp had to discontinue the use of strong mineral acids on account of the drastic action on the fiber and the poor color of the stock produced. His choice of sulphurous acid was a happy one but it did not entirely do away with the evil of discoloration or burning. for reasons which we shall see later.

Experimental Work Done

An investigation of the chemistry of sulphite cooking will put us in possession of some of the factors bringing about the discoloration of the pulp. Of course the chemistry of sulphite cooking is very complex and as yet not thoroughly understood but the author by eliminating as many of the variables as possible otained some very interesting results. A typical cooking liquor was used and various compounds, principally sugars and aldehydes similar to those formed during the cooking process were added and the temperature was carried up to 150 degrees and at a pressure of 75 pounds gage. The results were observed closely throughout the cooking period and the experiments were duplicated to check up results.

The cooking liquor used is a solution of calcium sulphite in sulphurous acid and oddly enough, although hundreds of thousands of gallons of this liquor are used daily, few investigators have been interested enough to investigate the behavior of sulphites and sulphurous acid under temperatures and pressures existing in the digester. When a search is made of the literature for information on sulphurous acid, only isolated pieces of work are found and these are scanty in information.

Practically every investigator has assumed that sulphurous acid acts as any other mineral acid and the reaction taking place in the digester under temperatures up to 150 degrees C. and pressures up to 80 pounds is the same as that which would go on in the cold. Sulphurous acid as everyone knows, who has had the misfortune to get his head over a leaky acid line, is a very unstable acid and therefore there is no reason for assuming that at 145 degrees C. for example, and 75 pounds pressure, it should react the same as at 20 degrees C and no pressure. Some very clever work of recent date[1] tends to prove that above 100 degrees C sulphurous acid does not exist as such but as a solution of SO_2 in water. This causes us to alter slightly our conception of the sulphonation of lignin and instead of sulphurous acid breaking up thus

$$H_2SO_3 \rightleftarrows H^+ + HSO_3^-$$

and reacting with the lignin, the SO_3 is the active agent in the sulphonation. It is true that the moisture in the chips may take part in the sulphonation but sulphurous acid is not necessary for the sulphonation to go on. This may be proven by using, as the author did, another medium than water in which the SO_2 was soluble. The results from this cook were extremely interesting and have opened up ground for some entirely new and valuable research.

With this picture of the reaction that goes on we see why the use of sulphurous acid was a success while sulphuric acid failed. Using sulphurous acid, we only have present the acids formed during the cook, whereas in using sulphuric acid we have, not only the strong sulphuric acid but the acids formed during the cook and recent work has shown that ligno-sulphonic acid is almost as strong an acid as sulphuric. It will be seen also how easy it is to use a base with the sulphurous acid in order to neutralize the acids formed during the cook whereas with sulphuric acid a very stable sulphate would be formed with the base.

In a previous article[2] the author has shown how the cooking liquor becomes alkaline during the major part of the cooking.

The author while conducting cooking experiments with glass digesters, developed at the Forest Products Laboratories of Canada, made a series of interesting observations during the cooking cycle. The whole interior of the digester was exposed to observation and any changes in the cooking liquor and chips could be noticed. With these glass digesters the age-old desire to see what was going on inside the digester was satisfied and changes in color of the cooking liquor could be seen.

It was very easy to observe the penetration in these digesters. The chips began to soften at the ends and gradually progressed towards the centre showing that the penetration was by the capillaries. The rate of penetration is very important and must be taken into consideration if a good pulp is to be obtained. Ligno-sulphonic acid has two (HSO_3) groups attached and exhibits strong acid properties but with only one (HSO_3) group attached it exhibits aldehydic properties. Now if there is not sufficient base present to neutralize the ligno-sulphonic acid formed it will act on the cellulose fibers, degrading them and giving a very weak stock. It will be shown later how this condition may also occur if the SO_2 content of the digester is permitted to become too low.

On the other hand if the temperature is raised too fast only one (HSO_3) group has an opportunity to add on and in the presence of alkalis or at high temperatures aldehydes form insoluble resins, discoloring the fibers and blocking the capillaries, thus preventing further penetration of the chips. This is the cause of hard centers in raw cooks.

Discoloration Studied

It has been frequently noticed in cooking that when there is an insufficient amount of base present the cook will discolor and burn. This has been attributed to the belief that the unneutralized ligno-sulphonic acid formed polymerises at the operat-

[1] Unpublished work by W. B. Campbell at McGill University, Montreal, Canada.
[2] "The Chemistry of Sulphite Cooking," Paper Trade Journal, Sept. 22, 1927.

ing temperatures. Experiments performed by the author do not bear this out.

Two runs were made using an aldehyde in the cooking liquor in the presence of bleached sulphite pulp. In the run where a sulphonic acid of an aldehyde was used no appreciable discoloration occurred although the pulp was quite badly degraded. In the other run, where the aldehyde was used the digester contents were very badly discolored and smelled strongly of resins. In this case, also, the stock was badly degraded. This would tend to show that sulphonic acid does not polymerize but where polymerisation occurs it is due to the aldehyde.

However, the ligno-sulphonic acid if not neutralized by the base will cause a darkening of the cook. During the cooking process hexosans and pentosans are dissolved, in appreciable quantities, from the wood. Sugars are also formed by the action of ligno-sulphonic acid on cellulose. These sugars are quite easily charred by the strong acid at the temperature existing near the end of the cook. This charring and not the polymerization due to the ligno-sulphonic acid probably accounts for the discoloration of the stock when the ligno-sulphonic acid is not neutralized.

A run made using bleached sulphite pulp and a sulphurous acid with 2.6 per cent butylaldehyde—B—sulphonic acid added, yielded a pulp that was quite badly degraded, showing the effect of small quantities of sulphonic acid on the fibers.

Runs were made with hexosans and pentosans using a regular cooking liquor to which 2 per cent of sulphuric acid was added. These runs showed that with this small concentration of a strong acid the cooking liquor darkened very rapidly around 145 degrees and before 150 degrees C was reached the cooking liquor was black. In these experiments the pentosans charred much more easily than the hexosans. These cooks gave off a very strong odor of burnt sugar showing that it was the charred pentosans and hexosans that caused the discoloration. This shows the effect of strong acids on sugars formed during the cook. Even small amounts of acid will cause this charring effect on the sugars around and above 145 degrees C and will discolor the fibers so that it is almost impossible to bleach them white.

Some sulphite pulp was cooked with sulphurous acid (6.42% SO_2) and 2.2 per cent of crotonaldehyde was added. This run showed a very rapid darkening around 145 degrees C and the stock was very badly discolored giving a strong odor of resins, showing that the discoloration was probably due to aldehyde resins. This stock was easier to bleach than that discolored by burnt sugars.

Cooking at Low Temperatures

When low operating temperatures are employed the tendency for a cook to burn is not so pronounced, partly because the resistance of the cellulose to attack decreases with a rise in temperature and partly for reasons that will be shown later. In some processes such as in the production of pulp to be used in the manufacture of artificial silk the strength of the fiber is of secondary importance. What matters most is the purity of the cellulose and this can be obtained in a short cook using high ending temperatures. This high ending temperature although it gives the desired product must be carefully supervised or reactions set in which are detrimental.

Let us examine for a moment the action of the cooking liquor under the conditions existing during the major part of the cook. We first have the bisulphite breaking down thus—

$$Ca(HSO_3)_2 \rightleftarrows CaSO_3 + H_2SO_3$$

giving additional sulphurous acid. Due to ionization we have the calcium sulphite broken up further.

$$CaSO_3 \rightleftarrows Ca^{++} + SO_3^{--}$$
$$2H_2O \rightleftarrows 2OH^- + 2H^+$$

$$\Updownarrow \qquad \Updownarrow$$

$$Ca(OH)_2 \quad H_2SO_3$$

From these graphic equations we see that more H_2SO_3 is formed but as stated above, sulphurous acid is incapable of existence above 100 degrees C. Thus breaking up the sulphurous acid to sulphur dioxide and water as fast as it is formed we have the reaction being forced to the right and finally we have the hydroxide of the base in solution rather than the normal sulphite. In another article by the author[3] it has been proven that the hydroxide is really formed.

This condition existing as is does at the end of the cook offers an explanation why in a short cook using temperatures around 145 degrees C and over, the cook is liable to "flop" or go black in a few minutes. Operators have noticed that when the total SO_2 content of the cooking liquor drops below a certain concentration around 0.10 per cent SO_2, that the digester contents will blacken very rapidly and we probably have our explanation here.

Klason Quoted

Klason, in determining his loosely combined SO_2 adds 10 cc. of 20 per cent NaOH, allows it to stand for half an hour, neutralises the alkali with HCl and titrates the sulphur dioxide that has been liberated with iodine. In this way he determines the amount of sulphur dioxide that has been loosely combined with the aldehyde groups originating presumably from the lignin complex. There is no reason why this same reaction should not occur in the digester since the liquor gives an alkaline reaction. Here we have the same conditions existing as in Klason's reaction. The cooking liquor is alkaline and the temperature is high which should aid the reaction. As soon as the SO_2 concentration in the cooking liquor becomes low enough to disturb the equilibrium the loosely combined SO_2 is split off leaving the aldehyde group free.

With the loosely combined SO_2 group split off from the adlehyde groups we have the condition of an aldehyde in the presence of an alkali at high temperatures and as is well known, aldehydes polymerize under these conditions. A dark brown insoluble resin is formed which imparts the black appearance to the liquor. It also acts as a dye giving the pulp a dark, burned appearance.

As will be seen from the above there are numerous factors which cause the discoloration of the cooking liquor and the weakening of the stock. The worst offender of these is temperature. Miller and Swanson have shown that the rate of reaction doubles for a raise of every 10 degrees above 110 degrees C. The removal of the lignin and encrusting matter depends on the difference in the rate of the chemical reaction, between the chemicals employed and the cellulose and lignin. This ratio of dissolution rates for encrusting material to cellulose decreases with a raise in temperature so that when one is using temperatures between 145 and 150 degrees C there is grave danger of greatly weakening the cellulose fibre.

Summary:—

It has been shown that the discoloration and burning of cooks is due to at least three causes.

(1) Effect of acids formed during the cook on the hexosans and pentosans in the pulp.

(2) Effect of unneutralized strong acids on the cellulose fibers.

(3) Effect of alkali and temperature on the aldehydes present in the cooking liquor forming insoluble resins.

[3] loc. cit.

New Superintendent for Frankfort Plant

[FROM OUR REGULAR CORRESPONDENT]

FRANKFORT, N. Y., November 26, 1927.—Andrew Oldfield has been appointed superintendent of the Frankfort Paper Products Corporation and will take over his new duties at once. He comes from Herkimer where he has for some time been officially connected with the paper producing industry. He succeeds W. A. McKee, who plans a much needed rest before announcing his plans for the future. The appointment was made following the resignation of Mr. McKee, who has been in charge of the plant here for many years, and who recently removed with his entire family to Utica. Mr. Oldfield has had many years of experience in various paper mills and he is well fitted for his new position.

The Loading of Paper*

The use of fillers in paper has a preponderating influence on the fibers, the degree of sizing and the appearance of the sheet. It is a big mistake to think that fillers are used merely to weight the paper, as they contribute to a large extent to improve its properties and to make it softer and more flexible.

Ordinary grades of paper, such as those used in lithography, are frequently loaded. It requires great skill to incorporate a large proportion of fillers in paper, yet nothing really practical has been published on the subject up to the present time. Nor have the theoretical aspects of loading been studied. The investigations published to date have dealt mainly with the physical properties of fillers; Shaw and Bicking,[1] for instance, carried out tests to see if there is any relation between the retention of china clay and its physical properties. Their investigation led to negative results, which does not agree with the indications found in certain works on the subject. Some authors state that the retention increases with the fineness of the filler; but this, again, is not in agreement with the results obtained by Schmidt-Neilsen, who states:

"Retention increases with the diameter of the particles of fillers in unsized papers; but with sized paper maximum retention is obtained with particles of a definite size."

Dr. H. Roschier has published a study of kaolin consisting of fine particles and of large particles. The finest grains were 0.1 to 0.5 mm. in diameter, which is still quite large as compared with colloidal particles which are as small as 0.001 mm.

Influence of Particle Size

As a matter of fact, the finest portion of commercial fillers which is intermediate in size between colloidal particles and coarsely ground material, constitute only about 25 per cent of the whole. From the standpoint of the colloidal theory, the finest portion of china clay is the one best utilized in loading paper, since the more highly dispersed it is the greater surface it offers to take part in any given reaction. As is well known, clay and kaolin are attracted toward the anode, and consequently carry a negative charge; but sometimes kaolin carries a positive charge, which is generally attributed to the presence of positively-charged impurities.

In the beater, the electric charge of kaolin is increased by the presence of hydroxyl ions from the size emulsion, and the alkali improves the suspension of the clay. The more highly dispersed the kaolin, the more readily does it mix with the fibers, as the contact surfaces (which, by mutual adhesion after the electric charges have been discharged on to the fibers, cause the fillers to be retained by the stock) are increased.

The work of Fodor has shown that ammonium hydroxide considerably increases the negative charge of the kaolin suspension; and the latter should be perfectly held by the cellulose fibers, which have a large positive charge on account of the presence of sulphate of alumina.

Addition of small quantities of ammonia facilitates the retention of kaolin by the fibers, and the same can be said of aluminum sulphate. On the whole, fillers are held in the paper mechanically; but they are also precipitated on the fibers by aluminum hydrate.

Numerous tests have led to the following conclusions:

Effect of Stock Dilution

A) The retention decreases as the dilution of the stock increases.

To 2.5 g. of oven-dry pulp were added 15 per cent of china clay and 2 per cent of sulphate of alumina (containing 16.6 per cent of alumina), and sheets weighing 80 to 90 grams per square meter were prepared. The retention was calculated from ash determinations. With the stock at a dilution of 1:200 the retention was 48 per cent, at 1:400 it was 43 per cent, and at 1:600 it was 40 per cent.

A consistency of 1:600 was used in all subsequent tests in order to obtain sheets as uniform as possible.

Effect of Increasing Aluminum Sulphate

B) On adding increasing amounts of aluminum sulphate, the retention is first lowered, then increases to a maximum, and again slowly falls off; it is therefore useless to increase the amount of aluminum sulphate above a certain value.

Using a sulphite pulp with 0.46 per cent ash and a chlorine number (Bergman) of 11.0, 10 per cent of china clay was added to 2.5 grams of oven-dry pulp, and increasing amounts of sulphate of alumina, from 1 to 10 per cent, were added. The consistency was kept constant, and the following retentions were obtained:

Sulphate of alumina, per cent	0	1	2	3	4	5	6	10
Retention, per cent	32	28	33	38	44	47	44	42

The papers thus made contained from 3.5 to 4.5 per cent of fillers.

According to the author, as most of the filler is held on the fibers by purely mechanical action, sulphate of alumina can have but a slight influence. It might be thought that the sulphate of alumina ions fixed on the fibers impart a positive charge to them, thus rendering them more apt to attract and hold the negatively-charged china clay particles; for this reason the facility with which the fibers can hold aluminum ions is limited. This accounts for the fact that addition of sulphate of alumina above a given limit has no further effect on the retention of fillers.

Retention is also affected by the properties of the pulp. If the latter has a high ash content, it will more readily hold aluminum ions and fillers. If the fibers are rigid (as in the case of strong pulps with high ash contents) the fibers are not so well held through merely mechanical effect.

Effect of Neutralizing the Acidity

C) The retention increases as the acidity due to sulphate of alumina is neutralized, and reaches a maximum for a pH value of 5.6.

The author carried out two sets of tests with pulp containing 0.51 per cent of ash and having a chlorine number of 15, 10 per cent of china clay being added together with various amounts of sulphate of alumina from 3 to 5 per cent. Increasing quantities of caustic soda were also added till the stock was exactly neutral (pH = 7), which caused the precipitation of an increasingly large quantity of colloidal aluminum hydroxide. The following results were obtained in the series in which 5 per cent of sulphate of alumina was used:

pH value	4.3	4.45	4.7	5.15	5.6	6.35	6.7	7.1
Retention, per cent	36	38	45	50	52	53	55	51

The notable increase in retention cannot be attributed to the amount of alumina precipitated by the caustic soda, since it represented at most 7 per cent of the filler when using 5 per cent of sulphate of alumina.

Effect of Increasing the Alum While Holding pH Constant

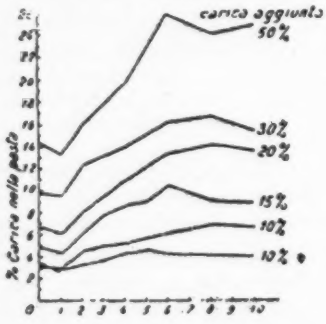
D) When the amount of sulphate of alumina is increased, while keeping the hydrogen-ion concentration constant, the retention first declines, then increases to a maximum with about 6 to 8 per cent of sulphate of alumina, and finally decreases again.

The accompanying diagram gives in graphical form the results obtained in this series of tests. The author has tried to show that in working at a constant hydrogen-ion concentration

* Translated from La Papeterie 49, 201-205, March 10, 1927, by A. Papineau-Couture.

[1] A comparative Study of Paper Fillers, by Merle B. Shaw and George W. Bicking. Tech. Paper of Bureau of Standards, No. 301 (1925).

(pH = 5.5) and increasing the sulphate of alumina content, the retention varied, and at the same time he tried to see the effect of varying the amount of china clay from 10 to 50 per cent.



The two lowest curves show the retention obtained with 10 per cent of china clay on varying the sulphate of alumina added from 0 to 10 per cent, one curve representing the results obtained without correcting the pH and the other the results obtained when the pH is kept constant at a value of 5.5. The latter gives considerably higher retentions. It should be noted that it was not always possible, in a given series of experiments, to keep the pH absolutely constant at 5.5, and that at times it was as high as 5.7.

On examining the curves it will be seen that the retention increased with the addition of sulphate of alumina up to 6 per cent of the latter, after which it decreased slightly. It will also be noted that with a given proportion of sulphate of alumina the retention remains about the same, irrespective of the amount of china clay added, up to about 30 per cent of the latter, above which it decreases. The author considers that this is a confirmation of the assumption that retention is chiefly mechanical rather than an adsorption phenomenon.

Effect of Rosin Size

E) Rosin size increases retention, provided the acidity is not increased by addition of aluminum sulphate.

The author carried out several series of tests, using 20 per cent of china clay and varying the amount of size and alum added so that there was 1.15 to 2.3 per cent of rosin and 0.84 to 3.35 per cent of alum. In each case two sets of experiments were made, with and without correction of the acidity to keep the pH constant at 5.5. Following are the results obtained with 2.3 per cent of rosin:

Alum	Uncorrected pH	Retention	Retention with corrected pH
0.84%	5.5	37%	41%
1.68	4.5	36	51
3.36	3.9	40	56

Effect of Sodium Silicate

F) Addition of waterglass, especially when used in conjunction with rosin size, greatly increases retention.

The waterglass used contained 14.7 per cent soda (Na_2O) and 35.7 per cent of silica; the china clay was added as an aqueous suspension both with and without addition of rosin size. After thorough mixing with the pulp, the sulphate of alumina was added and the pH was adjusted to a value of 5.6. When using 2.5 per cent of sulphate of alumina, 20 per cent of china clay and 1 per cent of waterglass, the retention without rosin was 43 to 46 per cent, and in presence of 1.15 per cent of rosin it was 47 to 50 per cent.

Effect of Stock Hydration

G) Hydration of the stock by beating increased retention.

Easy-bleaching sulphite pulp containing 0.30 per cent ash and having a chlorine number of 5.9 was beaten one hour in a Lampen ball mill, and the hydration or slowness was determined by a Schopper-Riegler tester. The variation in retention with degree of hydration was determined, other conditions being the same, and the pH value being kept constant at about 5.5.

Time of beating in hours.....	0	¼	½	¾	1	1¼
Degree of hydration	12	18	23	50	58	71
Retention per cent	44	57	58	65	69	74

The increase in retention may be attributed to the increase in surface of the fibers due to beating and also to the fact that the beaten fibers felt closer, thus forming a more efficient filter for holding back the filler.

Effect of Particle Size of Filler

H) Increase in the size of the particles of filler increases retention.

By levigation and decantation the author separated china clay into four fractions having grains varying in size from 0.001 to 0.005 mm. to 0.020 to 0.024 mm. Retention always increased with the coarseness of the filler, but decreased with increase in the amount of sulphate of alumina added. This proves that the retention of fillers is due merely to a fractional filtration, at least in the case of ordinary pulp. The use of coarse fillers has the further advantage of giving clearer back water on the paper machine.

The author insists on the fact that the statement, frequently found in books on paper making, to the effect that the value of paper fillers increases with their degree of fineness, should be corrected. He considers that relatively coarse filler, provided it is of uniform size, gives a smoother and more even surface and higher retention.

Effect of Addition of Ammonia

I) Addition of ammonia increases the retention of china clay.

According to Fodor, when ammonia is added to an aqueous suspension of china clay the latter acquires a negative electric charge and is easily held by fibers having a positive charge. Tests were carried out by adding to the stock (containing 4 per cent of aluminum sulphate) 15 to 20 per cent of china clay diluted in water containing a small amount of ammonia, and then neutralizing part of the excess alkalinity by adding dilute sulphuric acid to a pH value of 5.6. Retentions of 50 to 59 per cent were obtained.

Effect of Addition of Starch Solution

L) Addition of starch solution does not increase retention.

Tests were carried out to determine the effects of starch paste on retention. The latter always remained at about 5 to 6 per cent, which is not in agreement with the following results obtained by Blasweiller:

	Clay content of the paper	Retention
20% china clay	9.31	47
20% china clay with alum	10.2	50
5% starch		
20% china clay	12.2	61
5% starch		
5% waterglass		
20% china clay	13.98	70

Effect of Using Talc Instead of China Clay

M) Talc gives a higher retention than china clay.

The author wished to confirm the results obtained by Schmidt-Neilsen with Norwegian talc. Comparative tests were made with china clay and talc, with varying amounts of sulphate of alumina and size, but keeping the pH constant at 5.6. The results showed that sulphate of alumina increased the retention of both china clay and talc, but that the retention was higher with talc.

Paper Man Adopted by Blackfeet Tribe

[FROM OUR REGULAR CORRESPONDENT]

DAYTON, OHIO, November 28, 1927.—Paper mill men do not often have the opportunity of being honored by Redskins, and it is distinctively an honor now that the Indians are fast disappearing, hence when the Blackfeet tribe adopted Harry T. Ratliff, of the Champion Coated Paper Company, Hamilton, on their recent visit to that city, the whole fraternity shared in the honors conferred.

Current Paper Trade Literature

Abstracts of Articles and Notes of Papermaking Inventions Compiled by the Committee on Abstracts of Literature of the Technical Association of the Pulp and Paper Industry

By Clarence J. West, Chairman

Machinery

Worm Gear Drives for Paper Machines. Anon. Pulp and Paper 24, 1445-1447 (Dec. 2, 1926). Description of the Dominion Engineering drive as installed on the last four machines of the International Paper mill at Three Rivers, and on the four machines of International Paper's Gatineau mill. A.P.-C.

Roll for Paper Machines. W. Okuura. Fr. pat. 601,759. The roll proper constitutes the rotor of a motor, while the stator is mounted inside the rotor on a stationary shaft about which the rotor turns.—A.P.-C.

Back Pressure Adjustable Speed Steam Turbine. For Driving Paper Machines. Brown Boveri & Co. Fr. pat. 612,648. In order to obtain a proper balance between the power consumption (and consequently the amount of steam exhausted) and steam requirements for heating the driers irrespective of the speed at which the machine is run, a buffer-dynamo is mounted on the turbine shaft and is connected up with the mill circuit so that it can act either as a dynamo or as a motor. A small dynamo-tachometer is connected with the buffer dynamo; and any change in speed changes the voltage of the tachometer which in turn acts on a quick-acting regulator. A.P.-C.

Correct Performance of Rubber Rolls on Paper Machines. G. Becker. Zellstoff U. Papier 6, 400-401 (Sept. 1926). The quality, hardness, etc., of rubber rolls in relation to their performance on the paper machine are discussed. J. L. P.

Manufacture and Treatment of Felt Covered Rolls. W. Schmid. Papierfabr, 24, 695-697 (Nov. 7, 1926). Descriptive. J. L. P.

Horizontal Centrifugal Screen for Wood Pulp in Combination with a Grinder. A. Biffar. Ger. pat. 435,824. Papierfabr. 24, 702 (Nov. 7, 1926): Zellstoff U. Papier 6, 524 (Dec. 1926) A centrifugal screen and grinder combination for wood pulp is described. J. L. P.

Cylinder with a Perforated Bronze Covering for Board Machines. Anon. Wochbl. Papierfabr. 57, 1140-1141 (Oct. 9, 1926.) The new Voith bronze covered cylindrical screen for board machines (Ger. pat. 388,251) is described. This device permits a speed up to 45 m., while the usual cylinders perform at a speed of 30 m. or less. J. L. P.

Power Requirements of Paper Mill Machinery. S. A. Staege and C. U. Smith Paper Trade J. 84, No. 8, 193-197 (Feb. 24, 1927). Paper Mill 50, No. 104,106 (Feb. 26, 1927); Paper Ind 8, 2080d (Mar. 1927). A table is given showing the power input of some of the most recently installed sectional electrically driven fourdrinier paper machines having very low power consumption. A chart is presented, based upon extensive investigation, which is intended to show horsepower requirements of beaters for the various conditions indicated; it is based on the conventional practice of the past does not necessarily cover adequately some of the latest practices and developments in improved circulation, high cutting speed of exceptionally large lize or special design of beaters. A table is given showing a few more or less typical cases of jordan power consumption A.P.-C.

Power Requirement of Paper Machines. G. H. Golbs. Wochbl. Papierfabr. 57, 1126-1131 (Oct. 9); 1212-1217 (Oct. 30); 1355-1261 (Dec. 4, 1926); 58, 67-70 (Jan. 22, 1927). Part of a series of comprehensive articles covering the power requirement of paper machines. J. L. P.

Theories Relating to the Drive and Power Requirements of Paper Machines. H. Rappold. Papierfabr. 24, 566-569 (Sept. 12); 577-582. (Sept. 26, 1926). Concluding articles of a series comprising a theoretical and a mathematical treatment of power as applied to the paper machine. J. L. P.

Is a Simplification and Therefore a Reduction in Cost of Paper Machine Construction Possible? F. Hoyer. Papierfabr. 24, 595-597 (Sept. 26, 1926). A discussion of paper machine construction. J. L. P.

Paper Finishing Machine. L. M. Lacoste. Addition 30,984 to Fr. pat. 584,126. The machine described in the main patent is further provided with a stack of three rolls, two of cotton or paper and the third of iron, in order to still further attenuate the grain of the paper when the coating has been applied on a low-grade or coarse-grained paper. A.P.-C.

New Sling and Roll-Winding Machine for Paper Box Manufacturers. Anon. Pulp and Paper 25,216 (Feb. 17, 1927). Brief illustrated description of Camachine Simplex Type 40 Model BM. A.P-C.

Cutting Paper Board. E. C. R. Marks. Eng. pat. 260,008. The web of paper board is divided longitudinally by score-cut slitting disks adjustable on a shaft and cooperating with a glass-hard backing roll. It then passes between feeding rolls to a rotary cutter for severing the lengths into sheets, which drop on a conveyor discharging into a bin. In a modification the slitting discs are arranged in pairs, one set being used at a times. In a further modification, one of the feed rolls is used as backing roll for the score-cutters. A.P.-C.

Slitting Paper Board. E. C. R. Marks. Eng. pat. 260,009. Groups of slitting disks are carried adjustably on a member which can be rotated by a screw gear to bring either group of cutters into action without breaking the continuity of the web. The two groups of cutters may cooperate with the same backing roll or with separate backing rools. A.P.-C.

Slitter and Rewinder. Manufacture de Machines Modernes. Fr. pat. 613,399, Mar. 25, 1926. The strips into which the wide sheet is cut are wound on two shafts, odd strips going to one shaft and even strips to the other, one shaft being in front and the other behind the slitting knives. In order to obtain similarly wound rolls when the two sides of the paper are not alike (e. g., gummed paper, coated paper, surface-colored paper, etc.) means are provided for reversing the direction of one set of strips before it goes to its winding shaft. A.P.-C.

Tearing Device for Pulp Sheets, Etc. J. Bergmann-Knobel. Ger. pat. 431,290. Wochbl. Papierfabr 57, 1255 (Nov. 6, 1926). The tearing device consists of eccentrically placed smooth rolls, which travel faster than the sheet which passes between them. J. L. P.

Modern Paper, Sulphite Pulp, and Groundwood Mill in Finland. Anon. Wochbl. Papierfabr. 57, 1365-1366 (Dec. 4, 1926). Development of the Warkaus works of the A. Ahlstrom Osakeyhtio is briefly described. J. L. P.

Recent Developments in Paper Mill Appliances. M. Wintermeyer. Wochbl. Papierfabr. 58, 39-52 (Jan. 15, 1927); Papierfabr, 25, 33-43 (Jan. 16, 1927). The following recent developments in mill appliances are described; (1) the patented Thorne barking system, (2) the Voith pulp dewatering machine, (3) Bothner-Volth compressed air conveyors for ground wood and

pulp, and (4) the Grewin air blast system for the dry-end of the paper machine. J. L. P.

Maintenance of Paper Making Plant and Machinery. C. W. Brett. Papermakers' Monthly. J. 64, 466-468. (Dec. 15, 1926.) Brief discussion on the utility of welding for repairing plant machinery. A.P.-C.

Electrification of Paper Mills. Anon. Pulp and Paper 25, 113-116 (Jan. 27, 1927). Description of the turbo-generator installation recently carried out by the Fraser and Chalmers Engineering Works of the General Electric Co., (England), Ltd., at the Aylesford Paper Mills in England. A.P.-C.

Fuel Oil. James Strachen et al. Paper Maker and Brit. Paper Trade J. 578-579, 589-590 (Dec. 1, 1926); 73, 57 (Jan. 1, 1927). Discussion of the relative merits of fuel oil and coal. A.P.-C.

Relation of Thermal Storage in Boiler and Furnace to Fuel Application. F. P. Coffin. Pulp and Paper 25, 81-82 (Jan. 20, 1927). Brief outline of the modern tendencies to reduce thermal storage in boilers and furnaces in order that they may more readily respond to changes in regulation and control with variations in steam demand, as exemplified in various types of boilers. A.P.-C.

Magnitude of the Power Plants Chimney Losses. Anon. Pulp and Paper 25, 117-118. (Jan. 27, 1927). Brief discussion of these losses and of the use of CO_2 recorders and recording pyrometers in reducing them to a minimum. A.P.-C.

Advances in Paper Mill Drives. D. H. Knuckey. Paper Ind. 8, 1904-1911 (Feb. 1927). Review of the main features of improvements effected by the General Electric Company in electric drives for various equipment in pulp and paper mills. A.P.-C.

Manufacture of S. K. F. Steel Balls for Bearings. W. F. Shedinger. Pulp and Paper 25, 248-250 (Feb. 24, 1927). Detailed description of the processes. A.P.-C.

Combustion Control. James Mess. Pulp and Paper International No. 107-117 (Feb. 1927). Discussion of the importance of proper automatic regulation to vary fuel bed and draught according to the load on the boiler, with descriptions of a number of such installations with different types of fuel-burning apparatus. A.P.-C.

Steam Generating Units. John Blizzard. Pulp and Paper International No. 129-132 (Feb. 1927). A discussion of the general principles involved in designing steam-generating units, more particularly as regards estimation of heat losses and the estimation of the overall efficiency of the unit after the heat losses have been estimated. A.P.-C.

Armstrong Compound Steam Trap. Anon. Paper Trade J. 83, No. 22, 49-50 (Nov. 25, 1926). Description of the construction and operation of the Armstrong compound steam trap, which is a combination of the Armstrong inverted bucket trap and of a piston-actuated valve. Its merits are outlined. A.P.-C.

Power Problems in the Paper Industry. Edward P. Gleason. Paper Ind. 8, 1521-1526 (Dec. 1926). A discussion of power problems written for the executives and superintendents of paper mills, with the idea that more attention be given to the power problems in the industry and that part of the organization responsible for the same. A.P.-C.

Heat Utilization in the Pulp and Paper Industry. T. Samson. Zellstoff U. Papier 7, 15-18 (Jan. 1927). A general discussion relating to the more efficient utilization of heat in the pulp and paper industry. J. L. P.

Recovery of Condensed Steam in Pulp Mills. Rene' Escourrou Chimie Et Industrie 17, 21-4 (Jan. 1927). The condensed steam from indirect heating in pulping may become contaminated by the liquor through leaks in the heating coils and can result in rapid corrosion inside the boiler. The author describes a simple electric device which will readily indicate small increases in the conductivity of the condensate; and when the conductivity nears the danger point it is made to ring a bell to draw the operator's attention, even if he is at some distance. A.P.-C.

Various Types of Speed Reducers for Industrial Machinery. Anon. Pulp and Paper 24, 1581-1583 (Dec. 30, 1926); Paper Trade J. 84, No. 2, 48-52 (Jan. 13, 1927). Brief discussion of the various types of speed reducers and of their proper selection, bearings and lubrication. A.P.-C.

Miscellaneous

History of the American Paper and Pulp Association 1878 to 1927. Arthur Selwyn-Brown. Paper Trade J. 84, No. 8 (Special Section). 7-44 (Feb. 24, 927), A.P.-C.

History of the Paper Industry in Westphalia. P. Martell. Papierfabr. 24, 609-613. (Oct. 3, 1926). Historical. J. L. P.

Watermarks of the Early Printed Book in Oldenburg. H. Rauchheld. Papierfabr. 24, 663-664 (Oct. 24, 1926). Historical, dating back to books printed in 1599. J.L.P.

Old Papermaker-Wehrfritz. F. von Hoessle. Zellstoff U. Papier 6, 450-453 (Oct. 1926). An historical description of the Wehrfritz family of papermakers. J.L.P.

Masters of the Watermarking Art. J. Zeitler. Papierfabr. 24, 721-722 (Nov. 21, 1926). Historical. J.L.P.

History of Swiss Paper Manufacture. L. Neuberger. Zellstoff U. Papier 6, 487-489 (Nov. 1926). Historical. J.L.P.

Old Paper Mills of the Rhine Province. F. von. Hoessle. Wochbl Papierfabr. 57, 1149-1151 (Oct. 16); 1238-1240 (Nov. 6); 1432 -1436 (Dec. 18, 1926). Historical descriptions of old German paper mills. J. L. P.

Chemicals in the Paper Mill. Thomas J. Keenan. World's Paper Trade Rev. 86, 1060,1062 (Oct. 1, 1926). Brief discussion of the development of the pulp and paper industry along chemical lines. A.P.-C.

Paper Industry in Finland. Axel Solitander. Paper Maker and Brit. Paper Trade J. 72, 525-526 (Nov. 1, 1926). Brief review of its present position. A.P.-C.

Paper Research of the United States Bureau of Standards During 1926. Anon. Paper Trade J. 83, No. 24, 45-48 (Dec. 9, 1926). Summary of the work of the paper section of the U. S. Bureau of Standards during 1926. A.P.-C.

Bibliography of Paper Making for 1926. Clarence J. West and A. Papineau-Couture. Paper Trade J. 84, No. 8 217-259 (Feb. 24, 1927.) A.P.-C.

Abstracts of the Literature Relating to Pulp and Paper Manufacture. E. Graap. Zellstoff U. Papier 6, 403-406 (Sept.); 483-486 (Nov.); 530-532 (Dec. 1926); 7, 27-29 (Jan. 1927). Brief abstracts of articles in German journals relating to the mechanics of pulp and paper manufacture. The period covered is Jan.-Oct. 1926. J.L.P.

Abstracts of the Literature Relating to Pulp and Paper Manufacture. E. Graap. Zellstoff U. Papier 6, 445-449 (Oct.); 526-530 (Dec. 1926). Brief abstracts of articles, for the most part in German magazines, relating to the chemistry of pulp and paper manufacture. The period covered is April-Sept., 1926. J.L.P.

Report of the Convention of German Pulp and Paper Chemists and Engineers, Dec. 9-11, 1926. Opfermann and others. Papierfabr. 24, 793-798 (Dec. 19, 1926); Wochbl. Papierfabr. 57, 1416-1420 (Dec. 18, 1926). A brief report of the annual meeting of the German technical association in Berlin. Abstracts of the papers presented at the meeting are given. J.L.P.

Technical Man's Field. Arthur B. Green. Paper Trade J. 84, No. 8, 137-139 (Feb. 24, 1927); Pulp and Paper 25, 277-280 (Mar. 3, 1927). A discussion of the importance and difficulty of applying to industrial operations the results of research, exemplified by the application of the "beater drag" to the control of the treatment of the stock to duplicate desired results with certainty and precision. A.P.-C.

Phloroglucinol Reaction of Paper After Treatment with Lye. G. Wisbar. Wochbl. Papierfabr. 57, 1131-1132 (Oct. 9, 1926). Supplementary to the work of Korn (abstracted in C. A. 20, 3809 (1926), on the action of phloroglucinol on unbleached sulphite pulp. It is probable that by subsequently treating sulphite pulp fibers with boiling water or dilute alkali solution a compound

(perhaps vanillin) is set free, which is reactive towards phloroglucinol—J. L. P.

Paper Standardization from the Standpoint of the Paper Industry. H. G. Kutzer. Papierfabr. 34, 780-783 (Dec. 12, 1926). Paper standardization from the standpoint of the German paper industry is discussed in an address. J.L.P.

Selection of Paper. Anon. Paper Trade J. 84, No. 2, 43-44 (Jan. 13, 1927). A discussion of the selection of papers and boards (index bristols) for records according to the properties of the various grades of paper and board and according to the nature of the records and particularly the use to which they are to be put. A.P.-C.

Five Years of Progress in Waste Elimination. George D. Bearce. Paper Ind. 8, 1703-1710 (Jan. 1927). A review of what has been accomplished in the pulp and paper industry, particularly as regards white water recovery and utilization of wood room refuse. A.P.-C.

Recovery and Utilization of Waste Liquors in the Pulp Industry. Umberto Pomilio. Ind. Eng. Chem. 19, 344-346 (Mar. 1927). Brief discussion of the difficulties of trying to recover and utilize valuable products from pulp waste liquors, with an outline of some possible lines of attack of the problem. A.P.-C.

Process for the Removal of Hardness Formers in Water by the Exchange of Bases. Permutit Akt. Ges. Ger. pat. 437-809. Papierfabr. 24, 807 (Dec. 19, 1926). Hardness formers in water are removed by the use of glaukonite potassium iron oxide silicate. J.L.P.

Devices for Filtering Waste Water. H. Postl. Papierfabr. 24, 691 (Nov. 7, 1926). The dimensions of the Schmidt stock reclaimer are given. J.L.P.

Testing of Waste Water. G. P. Mueller. Papierfabr. 24, 681-683 (Oct. 31, 1926). The Kolkwitz-Fickest method of evaluating the waste water from paper machines and wood grinders, as well as methods involving the use of the centrifuge, are criticized. A more rapid procedure is to filter 2l. of the water through a 150 mm. Buchner funnel provided with a previously dried and weighed filter paper. The filter paper and contents are then dried and weighed, the difference being the weight of the fibers, etc., in the water sample. Examples are given. J.L.P.

Manufacturing Problems Handled Under the Service to Members Plan. Anon. Technical Association Special Reports No. 1, 128 pp. (Dec. 1926). A compilation of comments by a large number of practical mill operatives on a wide variety of mill problems covering sulphite, sulphate and soda pulp manufacture, black liquor recovery, paper machine operation, paper and board testing, etc. These reports cannot be satisfactorily abstracted. They contain a great deal of valuable information and suggestions from the standpoint of practical pulp and paper mill operations. A.P.-C.

Calculus in the Paper Industry. D. S. Davis. Pulp and Paper 25, 167-168, 190 (Feb. 10, 1927). Outline of a few instances in which calculus may be used to advantage in solving pulp and paper mill problems. The examples dealt with are: calculating the capacity of a digester, calculating the rate of drainage through materials for lining the bottoms of blow pits, calculating the relation between the freeness and temperature of sulphite pulp. A.P.-C.

Electrification of Paper. Schahle. Papierfabr. 24, 648-650 (Oct. 17, 1926). Polemic with Speter (Papierfabr. 24, No. 8 (1926). J.L.P.

Drying of Chips. Anon. Zellstoff U. Papier 6, 437 (Oct. 1926). The Nordstrom chip drying tower is described with comments by A. Klein, J.L.P.

Process for Manufacturing Fibrous Sheets from Textiles, Paper, Etc., by Impregnating with Metallic Chlorides. Albert Vohl and Co. Ger. pat. 433,983; addition to 377,659. Papierfabr. 24, 652 (Oct. 17, 1926); Zellstoff U. Papier 6, 523 (Dec. 1926). The chemical bath required for the amyloid formation is warmed so that the transfer of the treated material to heated cylinders or plates is not necessary. J.L.P.

THE CREATIVE WORKMAN

By R. B. Wolf

On account of the insistent demand for this stimulating pamphlet of R. B. Wolf's, which was published in 1918 and long since is out of print, it has been reprinted and is now available at $1 per copy. (Fifty cents to members of TAPPI)

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Process and Apparatus for Defibering Plant Stalks and the Purification of the Isolated Fiber. E. Gminder. Ger. pat. 437,-931. Papierfabr. 24, 827 (Dec. 26, 1926). A drum arrangement is employed in the defibering of plant stalks and the purification of the fibers. J.L.P.

Preliminary Treatment of Vegetable Materials Particularly of Straw. Raymond Fournier. Papeterie 48, 1105-1109 (Dec. 10, 1926). The author suggests that for the better grades of pulp from straws, esparto, etc., after the usual dusting and cutting the material be cleaned by treating with hot water or not dilute waste liquor and passing through a fairly long cylinder with perforations 1 to 4 mm. in diameter. This not only removes considerable dirt and impurities remaining after the dusting, but also dissolves out part of the incrusting matter and facilitates subsequent cooking operations. A.P.-C.

Eisemann Emergency Light for Paper Machines. E. Belani. Wochbl. Papierfabr. 57, 1428-1431 (Dec. 18, 1926). A storage battery emergency light outfit, especially adapted to paper machines, is described. The emergency lights are switched on automatically when the usual lighting circuit fails. J.L.P.

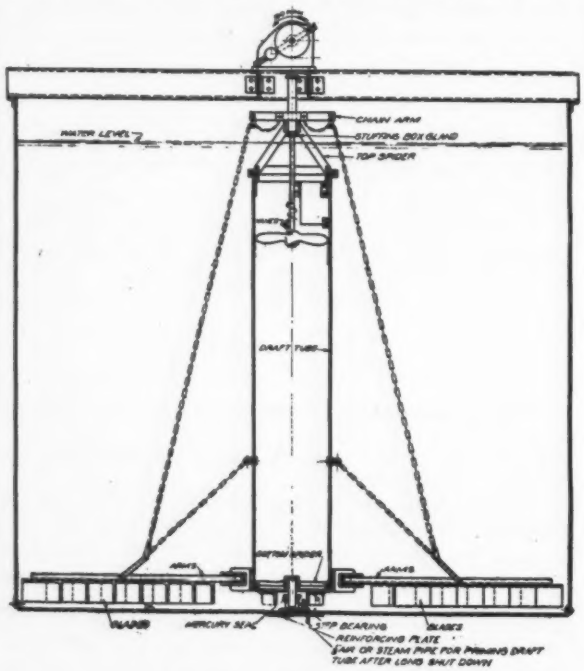
Adhesive for a Board Machine. Anon. Zellstoff U. Papier, 6, 437 (Oct. 1926). Four receipts for an adhesive suitable for a cardboard machine are given. J.L.P.

Roof Construction in Paper Mills. George D. Bearce. Pulp and Paper 24, 1593-1594 (Dec. 30, 1926); Paper Trade J. 83, No. 27, 37-38 (Dec. 30, 1926); Paper Mill 49, No. 52, 16, 37 (Dec. 25, 1926). Discussion of the problem of keeping the machine room in good condition, which comprises control of humidity conditions of air that comes in contact with the roof, and reduction of heat losses by retarding radiation. Modern types of paper mill roofs are brieffy described. A.P.-C.

The Dorr Impeller Agitator For Causticizing

The Dorr impeller agitator is a special adaptation of the Dorr reaction agitator to meet the particular requirements of certain process industries where air agitation is objectionable for chemical reasons and mechanical agitation must be used. It has an important application in sulphate pulp mills for causticizing green liquor, the sodium sulphide content of which makes it undesirable to employ air agitation since this would tend to oxidize the sulphide to the sulphate.

Referring to the illustration it will be seen that the tank contents are circulated through a centrally-located cylindrical draft tube in which a marine propeller is rotated. The draft tube, which revolves slowly, is equipped at its lower end with a pair of radial



SECTIONAL SIDE ELEVATION

arms equipped with plow blades. The tank contents are given a general circulating movement in both the horizontal and vertical planes which results in a high rate of change of position of the various particles in the liquor being causticized. The path of travel may be characterized as first, upward through the draft tube; second, radially outward just below the surface; third, down through the annular space between the draft tube and tank; and fourth, radially inward to the base of the draft tube. It is the function of the slowly revolving rake arms to keep the bottom of the tank free from settled solids at all times and to serve as a means of moving such particles as do settle to a point under the draft tube where the sucking action of the propeller may elevate them to the surface and return them to circulation.

The draft tube and propeller are driven by a special two speed reducer mounted on structural steel supports spanning the tank. A quill shaft construction is used, the draft tube being driven by a relatively slowly moving tubular shaft while the propeller is driven at a high rate of speed by solid shaft which runs inside the tubular one. The submerged bearing attached to the tank bottom is simply a guide and is subjected to very little wear since the entire weight of the mechanism is supported from above by drive unit mounted on the supporting spans. The radial arms are hinged to the base of the tube and fitted with chains so that they may be swung into a vertical position should the agitator be shut down when full and the arms buried in the settled solids. The feed enters through a pipe connection in one side and flows out at the solution level diametrically opposite when continuous agitation is practiced, although, of course, the agitator may be operated intermittently on the fill and draw principle.

Turnover, the time required to circulate the complete tank contents, may be varied to suit the particular material to be handled, the more pronounced the tendency for the solids to segregate, the more rapid the turnover required and vice versa. For causticizing soda ash with lime a turnover of one minute has been found desirable while other more finely divided easily suspended materials are handled with ease with turnovers of eight minutes. The rate of turnover is influenced by the speed, pitch, and diameter of the propeller.

This agitator is expected to find its chief chemical field in those continuous processes where continuous agitation is practiced by passing the material successively through three or more agitators arranged in series on slightly different elevations ahead of continuous settling equipment. Its chief points of interest are its ability to mix in two planes, to utilize the full tank volume unaffected by settled material, and power requirements averaging 1 hp. for units of the usual 10 by 10 ft. size.

European Paper Mills Install Trimbey Systems

[FROM OUR REGULAR CORRESPONDENT]

GLENS FALLS, N. Y., November 26, 1927.—Several large shipments for European markets have been made recently at the plant of the Trimbey Machine Company, of this city. A shipment was made a short time ago on the steamship *Reliance* which included two Trimbey and Tibbetts metering systems, one being consigned to Germany and the other to Russia. A consistency regulator was also shipped to a paper mill in Switzerland.

The shipment to Hamburg makes a total of 121 regulators and eighteen metering systems that have been put out by the Trimbey Machine Works since the first of the year. Only recently two systems and three regulators were sent to Sweden. Thomas Gastonguay, representative of the Trimbey Machine Company, is making plans for his fifth trip to the pulp and paper mills in Europe where he will supervise the installation of the apparatus recently shipped.

Swedish Paper Market Conditions

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 23, 1927.—Numerous orders are reported to have been received during the third quarter by Swedish manufacturers of kraft paper but sales of sulphite papers declined to some extent, although prices held firm, say reports received by the Department of Commerce. The market for news print was rather sluggish at the end of September, and southern mills were reported to have sufficient stocks on hand to meet the demand for several months.

Spaulding Plant Produces First Pulp

[FROM OUR REGULAR CORRESPONDENT]

PORTLAND, Ore., November 24, 1927.—The new plant of the Spaulding Pulp and Paper Company, Newberg, Ore., on November 14 turned out its first completed pulp. All machinery and the various units of the pulp plant have been tested and found satisfactory, and it is anticipated that actual production will begin soon.

Section of the

COST ASSOCIATION OF THE PAPER INDUSTRY

Affiliated with

THE AMERICAN PAPER AND PULP ASSOCIATION

Conducted by THOS. J. BURKE, C.A., Sec-Treas

The Determination and Application of Machine Hour Rates*

By G. K. Ferguson, Watervliet Paper Co.

A review of all that has been written and said regarding the subject of Machine Hour or Departmental Cost Rates, is discouraging to anyone who would try to find anything new or of added interest in the subject. Again the development of such rates is but one pattern of the whole fabric of cost accounting and offers difficulty as a separate subject because there is no place to stop until one has followed around the complete cycle of cost determination and accounting.

However, we will try to deal with this in a concrete way from our own experience with machine hour rates and knowing that a large percentage of mills as yet, have not made a serious attempt to accurately determine their costs, a review of some of the A B C's may be of value.

Starting a Cost System

For our purpose today let us assume that a mill proposes to start a cost system. The purpose of setting up a chart of accumulation and distribution of operating costs is to translate the information available from the old plan of accounting into the necessary information for the new plan of accounting so that it will correspond with the classification of the operating accounts and the classifications of the operating or expense analyses and for the determination of operating rates immediately until the new accounting system is in operation long enough to revise the rates according to the actual charges made by the new classification. Our experience was that this took several months. Two years is really required to reach any degree of accuracy.

Whether or not this chart is made up from past records alone or from our best estimates as to what our expenses will be in the future, determines partly whether or not it can be called a budget system.

The chart is set up on the basis of the fundamental principle that the cost of the product is to be determined on the basis of the routing of the product, that the product is to be charged with the operating costs of each "productive" department and that the cost is to be based upon the amount of time put upon the individual units of the product in each of the productive departments, at the operating rate per hour or per other unit. The total cost of our product will then be the sum of the direct materials and the operating cost in the departments through which the product passes.

*Address delivered at Convention of the Cost Association of the Paper Industry, Statler Hotel, Detroit, Mich., on October 21, 1927.

The chart before you is not complete but is to serve only as an illustration of method and essential principles. We have meant to include enough items of each kind so that the basic principles would be clear. There has been no attempt at refinement and the amounts used are not necessarily even relatively accurate.

No matter in what detail we may carry our departmental divisions and our expense classifications—finally they must all reach the productive department in order that they may reach the products through our operating rates. To accomplish this on the chart, we accumulate horizontally and distribute vertically.

COST ASSOCIATION OF THE PAPER INDUSTRY
18 East 41st Street, N. Y. City.
A. B. C. PAPER COMPANY
OPERATING ANALYSIS

Productive Depts.	Making Dept. (Beaters and Paper Machine) January	February	March	April	May
Direct Charges:					
Sundry supplies	37.29	46.61	41.20		
Oils and grease	67.15	59.04	81.11	47.98	55.69
Clothing	256.68	469.44	1411.56	411.11	151.07
Wires	348.89	365.65	765.65	.....	384.89
Payroll	3200.43	2998.82	3403.18	3178.93	3158.01
Extra labor	83.30	86.12	105.30	96.85	72.80
Liability insurance	36.07	33.80	38.35	35.83	35.59
Equalizing & Fixed Charges	1772.77	1772.77	1772.77	1772.77	1772.77
Auxiliary Charges:					
Heat, fire protection & steam	2079.20	2079.20	2079.20	2079.20	2079.20
Electric power	3645.87	3103.84	3498.45	3016.86	3086.51
Water power	548.59	398.34	327.54	902.34	570.66
Maintenance of machinery	2052.42	1271.22	1079.43	1124.00	840.13
Contributive Departments	799.47	833.42	932.57	891.49	754.31
Central Departments	1534.24	1498.44	1304.89	1391.80	1732.04
Divisional Departments	2098.86	2196.55	1842.86	1893.84	2089.87
Total Operating Cost	18561.13	17213.26	18684.06	16843.00	16783.54
Total Chg to Product	18463.60	17217.45	19161.10	18655.80	17899.40
Idleness this month	....	....	....	....	247.01
Idleness to date	....	....	....	....	247.01
Underabsorbed this month	97.53	....	....	....	....
Overabsorbed this month	....	4.14	477.04	1812.80	1362.87
Net underabsorbed to date	97.53	93.39	....	....	....
Net overabsorbed to date	....	....	383.65	2196.45	3559.32

—By George K. Ferguson.

Explaining the Chart

With this principle before us, we will proceed with the chart. The titles over the vertical columns (see next page) are the new ledger accounts for the cost accounting plan for the A.B.C. Company. As previously stated, these are not meant to be complete but we have tried to include some of each kind of expense items. The new departmental classifications appear at the extreme left and our first consideration is with the first half of the chart or through the totals of the equalizing and fixed charges. The totals of the vertical columns are the totals of our ledger expense items and whether or

COST ASSOCIATION OF THE PAPER INDUSTRY—18 East 41st Street, New York City.
A. B. C. PAPER COMPANY
CHART OF ACCUMULATION AND DISTRIBUTION OF OPERATING COSTS
BY GEORGE K. FERGUSON

Departments	Direct Charges				Equalizing and Fixed Charges										Auxiliary Departments				Contributive		Central					
	Material and supplies	Labor	Liab. insurance	Total	Loss in inventory		Loss in rejected paper		Taxes		Insurance		Depreciation	Total	Repairs and maintenance	Power	Direct steam	Heat and fire protection	Total	Yards and sidings	Stores and handlers		General manufacturing		Buildings		Totals	Yearly units	Process or hourly rates
	$	$	$	$	Sh. %	Amt. $	Sh. %	Amt. $	Sh. %	Amt. $	Sh. %	Amt. $	$	$	$	$	$	$	$	$	Sh. %	Amt. $	Sh. %	Amt. $	Sh. %	Amt. $	$		
Paper Stock Conversion	8760	32140	360	41260	25.0	1200	6.7	804	5.8	174	1840	4518	3490	16330	3530	2350	25700		40.0	2007	35.6	1750	33.6	3012	78247	6750000	1.16 cwt.
Making (Machine & Beaters)	12140	39130	440	51710	25.0	2880	23.4	2808	20.2	606	4920	11714	13850	38320	19230	3560	74960		50.0	2509	43.4	2133	49.0	4392	147418	6982 hrs.	21.11 hr.
Calenders	130	9110	100	9340	10.0	480	4.8	576	4.2	126	1309	2491	510	2190		220	2920				10.0	492	2.4	215	15458	6994 hrs.	2.21 hr.
Cutters	20	3010	33	3063			5.0	240	1.2	144	1.7	51	212	647	170	110	130	410			3.3	162	1.5	134	4416	1817 hrs.	2.43 hr.
Finishing & Packing	30	4130	50	4210							0.8	24	13	37	20		80	100			4.6	226	2.0	179	4752	3468 hrs.	1.37 hr.
Stock & Shippers	10	1850	19	1879	10.0	200			5.2	624	5.1	153	91	1068	80		720	800			2.1	103	11.5	1031	4881	9450000 lbs.	.052 cwt.
Buildings		870	9	879					20.5	2460	17.3	519	1410	4389	490		1860	2350	1296		1.0	49	100.0	8963	255172		
General Mfg.		4000	42	4042					1.8	216	1.2	36	87	339	32						10.0	502					
Stores & Handlers	11	2780	31	2822	10.0	200			6.0	720	5.6	168	113	1201	15		980	995			100.0	5018					
Yards & Sidings	27	765	8	801					1.3	156	1.0	30	190	376	120			120	1296						3477		
Box Shop	95	2370	26	2491	10.0	200			24.3	2916	30.6	918	4570	8704	2120	57160	22760	10020	(Not | Distributed)							
Power Plant	60536	18370	210	79116	15.0	300				420	3.1	93	614	1247	20990	Total	89940										
Maint. & Repairs	12310	7375	78	19763	5.0	100			3.5																258649		
Totals of Expense Accounts	94069	125900	1406	221375	100.0	2000	100.0	4800	100.0	12000	100.0	3000	15474	37274													

not we have difficulty in filling in the chart depends entirely on the detail of our previous accounting. In order to properly reshape the data from our ledger it will be necessary in most cases to do it on separate sheets, entering the final amounts on the chart.

While the "% share" of taxes is percent of total values plus inventory values; insurance is percent of insurable values; and depreciation is actual depreciation of departmental equipment; we find that in some cases an arbitrary division must be made, based on our best judgment.

Now as we have planned in our new accounting set up to close out our Repair and Maintenance Department first, we have placed that department at the bottom of our chart and now add horizontally the items accumulated. We distribute them as accurately as our past records make it possible—vertically. This is our first step up and is also the first step we will take in the periodic closing of our books. The same procedure follows with the balance of our "non-productive" departments until they are all redistributed to the productive departments.

In some instances departments that are closed out last have a definite charge to departments that have already been closed but the chart should be previously arranged to reduce possible back charges to the minimum. Where they are of enough importance to effect accuracy they can be provided for in our closing entrees.

The only department not redistributed is the Box Shop as the cost of cases or frames is to be charged direct to product at a scheduled charge per case or frame.

We have now accumulated all of our expense, that is to be rate charged to product, in our productive departments and all we need is normal capacities or hours to determine our rates.

Record of Time Down

These should be available from our records. At Watervliet we keep a record of time down under the following classifications—changing, wash-ups, repairs regular, repairs unusual, and miscellaneous. The time down for changing is added to the time actually running, as changing is charged as operating time, and the total is the basis of our socalled normal capacity or normal hours.

There has been much consideration given to some provision for idle machine time that is caused by conditions outside of our own plants, such as low water, floods, lockouts, strikes, lack of orders, etc. I have heard it called "Lag" or "Inoperative Contingencies" and it has been urged that we provide in our machine rates, this margin. It makes little difference whether we accomplish this by reduction of normal hours or by providing a reserve to care for such contingencies, our machine hour rate will reflect the provision.

Let us take this equation with the often suggested 15 per cent allowance for these possible shut downs and test it by substituting maximum limits. Does it not follow that if we increase our costs and estimates 15 per cent that we decrease the probabilities of securing orders in a competitive market, assuming quotations are based on costs. To be logical, we must recognize this increased hazard by a further allowance or provision in our costs and we boost our costs again, which leads us to an absurd situation quite rapidly.

At Watervliet our whole effort has been based on the premise —that a Cost Accountant is privileged to figure costs only, and "Costs" we define in the very literal meaning of the word, generally a separate consideration from value and of a purity which permits of no admixture with losses, which are not inherent or actually suffered in routine operation.

Saves Lots of Discussion

We have found that careful definition often saves a lot of discussion; for illustration, it is possible for you and I to argue about religion for several hours only to find at the end that in our discussion we were not even talking about the same thing, as we each had an entirely different definition of God.

Again, at one of the recent meetings of the Kalamazoo Valley Local Chapter of this Association, the cost of exhaust steam was being discussed. It was argued that as exhaust steam still had 85

per cent of its heat as live steam, that it should be charged to the Departments using such exhaust on the basis of 85 per cent of the cost of live steam and the Power Plant credited with balance. The argument being that that is the *value* of the steam and what it is worth to the consuming departments, etc.

Such reasoning could easily have serious results, live steam would cost so little more and is sometimes so much easier to use that department heads might elect to use live steam in the place of exhaust, in which case we would soon learn the difference between value and costs. Again if the power plant is credited entirely with the exhaust so priced, the cost of a kilowatt hour would be so depressed below its figure that our distributing of our power costs would be wrong—and again not furnish the proper impetus for the conservation of power.

For the accountant, as he is determining his exhaust steam rates or other rates with which to cost the product made, there is only one question to be answered—What does it cost? What does it cost us with our particular power plant to make a pound of exhaust steam; what does it cost us with our mill, our equipment, our expenses, to run a machine for one hour?

Should Be Recognized as Loss

Is possible time down during the year for strikes, lockouts, coal shortages, floods and business depressions a part of our costs or should it be recognized as a loss, a proper charge to our profit and loss account? We are sure that a majority of you agree with this definition, for there it will make the greatest impression upon the executives and not tend to prevent the securing of additional business, which is our only hope of wiping out this loss, providing it is caused by lack of business.

So our normal hours is possible hours less time down for usual wash-ups, repairs, etc. Normal capacity in our paper stock department comes from our average tonnage through that department. We have put the charging of the stock and shipping department on a like basis assuming that the A. B. C. Company runs only actual shipping orders.

The rates thus developed and shown on chart can be used at once until such time as our new accounting system shows what adjustments are necessary.

The application of Machine Hour Rates needs little comment. As previously stated, the rates are so developed that the cost of materials together with the product of machine time and its operating rate should give us the mill cost of our product. However, the reconciliation of our rates sometimes is a little difficult unless a careful analysis is made.

Idle Time

The only confusion we had at Watervliet was caused by our Idle Time. There was provided in our accounting set up an Idleness Account which was to be closed into Profit and Loss. Idleness being defined as time down due to lack of business. But it seems impossible to anticipate such idleness—especially in departments other than the Making Department and we invariably have some lack of business idleness occurring while the men are on pay. Accordingly we have two hourly rates for this variety of idleness; one for Idleness, on pay and one for Idleness, not on pay.

Yet another factor creeps in to cause time down and we are particularly susceptible to it in our coating mill where there are several productive departments in close contact and where the nature of the product causes a wide variation in time required per hundred pounds.

In our Coating Department we may get a 400 pounds per hour of some light weight, narrow, coated two sides sheet or 1400 pounds per hour, on heavy weight coated on one side. Such fluctuations cause time down in the Finishing Departments in spite of our best planning and we have determined our average amount of lost time and have provided for it in our rates. For want of a better name we call this provision in hourly rates—tolerance, expressing it in percent and allowing for it in time down before any idleness is credited.

To make this talk complete and to satisty all requirements of our subject, we submit also a specimen page from our operating analysis (See first page). There is nothing new about this and no doubt some have developed forms which they like better, but the essentials are here—a somewhat condensed expense analysis of the department, a total of the cost register, a report of idleness credited, and the measuring stick of the efficacy of the machine hour rates—the over and absorbed account.

Definitions and Classification Committee Meets

The Committee on Definitions and Classification of Paper of the American Paper and Pulp Association, made up as follows: Chairman, R. F. McElwain, Crocker, McElwain Company; Vice-Chairman, Clarence J. West, National Research Council; B. W. Scribner, Chief, Paper Section, Bureau of Standards; E. O. Reed, Office of Public Printer; W. G. MacNaughton, Secretary, Technical Association; P. S. Hanway, American Paper and Pulp Association; Morgan H. Thomas, Garrett Buchanan Company; *Ex-officio*, D. C. Everest, Marathon Paper Mills Company, and Dr. Hugh P. Baker, American Paper and Pulp Association, held its final meeting at the Cosmos Club in Washington on November 29.

Dr. Clarence J. West, of the National Research Council in Washington, vice-chairman of the Committee, has done an exceptional piece of work in the revision of the booklet printed in 1924 by the Lockwood Trade Journal Company, under the title "Classification and Definition of Paper." This first publication on the classification and definitions of paper was produced by a joint committee on paper classification and a committee on definitions.

Developments in the industry made it seem wise to revise this earlier report and it is believed that the report which will now be put out will come a step nearer to definitions and classification of paper which will be truly representative of the industry's general understanding as to the great number of different papers produced in this country.

While every effort has been made by the committee to work out the revision on the basis of close contacts with various groups and with various mills, it may be that the proposed changes in various definitions may not have been submitted to all the mills. The committee wishes it understood that it will welcome any comments or suggestions which may be made either to Dr. Clarence J. West or Dr. Hugh P. Baker, American Paper and Pulp Association.

It is not to be expected that the definitions of paper as proposed by the committee will be accepted as official by the entire industry. However, it is certain that every time an effort is made to put definitions and classification on to a sounder and more workable basis, the nearer the approach to a check list of definitions which will be accepted as official. Repeatedly during the past four years misunderstandings have arisen as to definitions of various grades of paper, and some trouble has come out of these misunderstandings. The nearer the industry can come to accepted definitions, the less likelihood of misunderstanding and trouble.

Eldridge Estate Appraised

[FROM OUR REGULAR CORRESPONDENT]

WARRENSBURG, N. Y., November 26, 1927.—The gross estate of the late Milton N. Eldridge, at the time of his death president of the Schroon River Pulp and Paper Company, is valued at $84,530.48, according to the transfer tax appraisal which has just been filed in surrogate's court. Debts and administration expenses amounted to $5,321, leaving a net estate of $79,209.15 which was bequeathed to Miss Martha Eldridge, sister, of North Creek. The appraisal showed real estate valued at $4,000, cash $16,684.42, mortgages and bonds, $13,020, stocks $44,110.24. Several hundred shares of stock in the Schroon River Pulp and Paper Company were included in the holdings of Mr. Eldridge.

Important Freight Rate Hearing at Watertown

[FROM OUR REGULAR CORRESPONDENT]

CARTHAGE, N. Y., November 26, 1927.—The largest assembly of paper manufacturers and representatives ever gathered together here were in attendance last week at the freight rates case hearing before the Interstate Commerce Commission in the county court house at Watertown. The hearing was called following complaints of several prominent paper firms claiming excessive rates on shipments of news print, wrapping paper and paper bags from Northern New York to points west of Buffalo and east of the Mississippi. Examiners W. H. Smith and A. J. Sullivan were the representatives of the Interstate Commerce Commission.

The complaining firms in the action are the St. Regis Paper Company, the Harrisville Paper Company, Taggart Brothers Company, and the Dexter Sulphite, Pulp and Paper Company, with several rilroads, including the New York Central, defendants. Earl C. Calhoun, commercial counsel of the New York Central legal staff, appeared for his concern and the railroads not otherwise represented.

Heated arguments between Mr. Calhoun and Wilbur La Roe, attroney for the paper concerns, featured the opening session when there was considerable discussion as to whether the news print, wrapping paper and paper bag cases should all be heard as one. It was decided that the cases will all go on one record.

J. A. Quinlan, traffic manager of the St. Regis Paper Company and allied concerns, was the first witness answering many questions relative to the climate in this section and geographical questions concerning the territory. It was also shown that Watertown is on the main channel of International traffic serving as a terminal for various points in Canada and Northern New York. Other evidence offered was to show that Watertown and Northern New York should have a rate which compares favorable with rates charged competitive companies in other territory. By maps which were produced after Mr. Quilan had taken the stand attorneys for the paper firms showed that at the points where the New York Central monopoly begins the company starts its increased rates, which includes the cities of Utica, Camden, Oswego and Central Square. Paper manufacturers pointed out that the rate from this section to Chicago on news print is 38½ cents for one hundred pounds while from Niagara Falls to Chicago the rate is 22½ cents and from Eastport, Me., to Chicago 38½ cents. They claim these rates are good examples of irregularity in the present system.

Charles E. Bell, traffic analysist, of Washington, D. C., was one of the principal witnessess giving an exhaustive analysis of freight rates from Northern New York to the territory under attack and compared rates in effect from other sections where there are paper mills competing with local companies.

Losses of big paper orders because of the inability to compete with manufacturers in other sections where lower freight rates are charged by railroads summed up most of evidence by several witnessess representing paper firms. During the testimony two cases were cited where mills in this section are barred from Chicago territory because it is impossible for the local concerns to meet the price of competitors due mainly to the high freight tariff imposed by railroads operating between this section and the Middle West.

John N. Carlisle, appearing for the St. Regis Company, said that paper products are the life of the community and that for several years efforts had been made to obtain an equitable freight rate for Northern New York although conferences had failed to bring desired reductions. He told of the extensive reforestation work being carried on by the company to help save the paper industry and said that abandonment of the International Paper Company's mills at Brownville and Glen Park were due mainly to excessive freight rates.

George W. Sisson, president of the Raquette River Paper Company, of Potsdam, in his testimony declared that paper manufacturers of this section face three economic problems. The first is the disappearance of the raw material, the forests; the second is the expansion of the industry in Canada and the third is freight rates. He told of losing Chicago contracts because of the high tariff and said mills of this section will disappear unless some relief was received. Frank A. Augsbury, president of the Algonquin Paper Company told of having been promised better rates when his firm constructed a new mill four years ago but as yet no revisions had been made.

Following the conclusion of testimony on Wednesday an adjournment was agreed upon by those involved in the case and the next hearing will be conducted before the same commissioners at Washington on December 19.

Albany Plant Receives Heavy Pulp Shipments

[FROM OUR REGULAR CORRESPONDENT]

ALBANY, N. Y., November 19, 1927.—Shipments of pulp for the A. P. W. Paper Company are continuing to be received here from Nova Scotia with the company expecting that the closing of the season within a few weeks will witness the breaking of all records from a shipping standpoint via the water route. The sixth ocean freighter to bring pulp cargoes here docked last week at the barge canal terminal on North Ferry street with about 2,000 tons for the company's North Albany plant and one and possibly two more are expected within the next few weeks with shipments from Nova Scotia before the season is officially brought to a close. The *Midarnes*, owned by the Thavenot Steamship Company, is expected to dock here within the next week with a large consignment of pulp for the paper firm.

According to Donald G. Kibbey, traffic manager of the company, more ocean tonnage was received this year than ever before in the firm's history and plans are now under way for resuming the traffic over the water route on a more extensive scale next year. It is estimated that over 50,000 tons of pulp have been received at the Albany plant via ocean carriers during the past season.

The A. P. W. Company is aiding the Albany Port Commission in its campaign now under way to provide an ocean terminal at Albany and it is now only a matter of time before the large ocean steamers will be enabled to dock at Albany with regularity. Dredging of the channel in the Hudson River near Albany is progressing rapidly with expectations that the work will be completed within two years and inquiries are pouring into the office of the Albany Port Commission regarding the size of vessels which will be able to navigate through the new route.

Several warehouses have been constructed and plans are going forward under the direction of the Albany Port Commission for providing paper manufacturers of the district with a seaport which will be recognized as one of the best in the country within the next few years.

News of the Boston Paper Trade

BOSTON, Mass., November 28, 1927.—Due to the increase of the business of Tileston & Hollingsworth, Howard Wallingford has become assistant to the vice-president, and Charles S. Trefrey, New England sales manager, effective November 15. The firm believes that their promotion is richly deserved.

The November number of "John Carter's Paper" contains a presentation of the men who make up the John Carter organization—J-C-Men, as they are called in that house. Pictures of each one are printed.

The November number of "How", published by Tileston & Hollingsworth under the editorship of A. V. Howland, notes the exceptionally high finish and unusual folding qualities of Silk Surface. This paper is a lighter weight stock than coated, and is of especial advantage in taking half tones.

Hubert L. Carter, treasurer of Carter, Rice & Co., is expected to return from California about December 1.

TANNATE LASTED FIVE TIMES AS LONG AS RUBBER ON A JORDAN

A WISCONSIN company began using Tannate Belting about a year ago. They now have a 3-inch light double governor belt; an 8-inch heavy double on rewinder; two 12-inch heavy doubles on beaters, and a 13-inch heavy double on a Jordan.

The report says, "Well pleased with all of them, especially the 13-inch on the Jordan—a cross belt."

They had been using 14-inch 8-ply rubber belts on the Jordan. These seldom lasted more than three months. The Tannate has been on fifteen months and "promises to run for years."

Rhoads Tannate Belts, with their great strength and unusual grip, are real trouble savers in paper mills.

They will run in water. They are economical. They are always sold under the Rhoads Service Guarantee.

Use Rhoads Tannate Lace Leather
It outlasts rawhide three to five times

J. E. RHOADS & SONS

PHILADELPHIA .....37 North Sixth Street
NEW YORK .....104 Beekman Street
CHICAGO .....324 West Randolph Street
ATLANTA.....70 Forsyth Street, S. W.
CLEVELAND .....1224 W. Ninth Street
Factory and Tannery: Wilmington, Del.

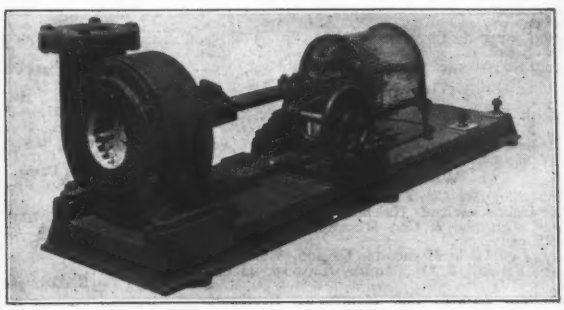
Ham Feltz says:

"Payin' a little extra to get the best wet felt you kin find is one way to cheat the coal pile. It's cheaper to let the water run through a high grade Hamilton felt than to sweat it out of the paper with high cost steam. Check it up as I've done and you'll find it a case of only dimes against dollars."

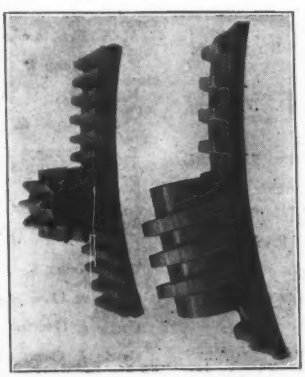
Hamilton Felts

Positive Jordan Filling

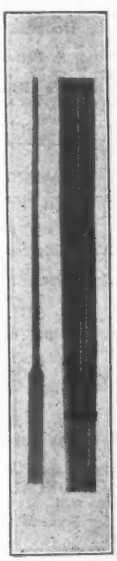
Trade Mark
POSITIVE
Reg. U. S. Pat. Off.



Bahr Centrifugal Refiner



Rotary Drive



Beater Paddles

The Bahr Brothers' Mfg. Co.
Marion, Ind., U. S. A.

Cable Address
POSITIVE
Western Union Code

Imports of Paper and Paper Stock

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING NOVEMBER 26, 1927

SUMMARY

Cigarette paper .....90 cs.
Wall paper .....56 bls., 15 cs.
Paper hangings .....37 bls., 14 cs.
News print .....22 bls.
Stencil paper .....38 cs.
Printing paper .....3 bls., 17 cs.
Sulphate paper .....327 rolls
Wrapping paper .....2 cs.
Packing paper .....56 bls., 4 cs.
Decalcomania paper .....19 cs.
Metal paper .....2 cs.
Coated paper .....15 cs.
Surface coated paper .....118 cs.
Drawing paper .....39 cs.
Filter paper .....213 bls., 7 cs.
Colored paper .....48 cs.
Glazed paper .....4 cs.
Note paper .....1 cs.
Writing paper .....21 cs.
Straw paper .....290 rolls
Miscellaneous paper .....201 bls., 73 cs.

CIGARETTE PAPER

British American Tobacco Co., Laurentic, Liverpool, 33 cs.
Standard Products Corp., Paris, Havre, 56 cs.
J. Ventalino, Gerania, Trieste, 1 cs.

WALL PAPER

Globe Shipping Co., Cleveland, Hamburg, 5 bls.
F. Blank, Cleveland, Hamburg, 2 cs.
R. F. Downing & Co., Minnesota, London, 25 bls., 10 cs.
F. J. Emmerich, Minnesota, London, 3 bls.
J. E. Bernard & Co., Arabic, Antwerp, 23 bls., 1 cs.
American Express Co., Mauretania, Southampton, 1 cs.
Hudson Freight Forwarding Co., Mauretania, Southampton, 1 cs.

PAPER HANGINGS

A. C. Dodman, Jr., Inc., Laconia, Liverpool, 37 bls.
Whiting & Patterson Co., Inc., Majestic, Southampton, 7 cs.
Whiting & Patterson Co., Inc., Mauretania, Southampton, 7 cs.

NEWS PRINT

Walker, Goulard & Plehn Co., Bergensfjord, Oslo, 22 bls.

STENCIL PAPER

Arlac Dry Stencil Co., Cleveland, Hamburg, 38 cs.

PRINTING PAPER

Oxford University Press, Laurentic, Liverpool, 17 cs.
Walker, Goulard & Plehn Co., Gerania, Trieste, 3 bls.

SULPHATE PAPER

Insight Paper Co., Bergensfjord, Frederickstad, 327 rolls.

WRAPPING PAPER

Japan Paper Co., American Trader, London, 2 cs.

PACKING PAPER

Haule Wax Paper Manfg. Co., Cleveland, Hamburg, 4 cs.
Steiner Paper Corp., Bergensfjord, Oslo, 56 bls.

DECALCOMANIA PAPER

C. W. Sellers, Cleveland, Hamburg, 4 cs.
B. F. Drakenfeld & Co., Laurentic, Liverpool, 15 cs.

METAL PAPER

Schmidt & Pritchard, Cleveland, Hamburg, 2 cs.

COATED PAPER

Globe Shipping Co., Cleveland, Hamburg, 15 cs.

SURFACE COATED PAPER

P. C. Zuhlke, Arabic, Antwerp, 72 cs.
Gevaert Co. of America, Arabic, Antwerp, 44 cs.
International Forwarding Co., Cleveland, Hamburg, 2 cs.

DRAWING PAPER

Keuffel & Esser Co., Cleveland, Hamburg, 36 cs.
H. Reeve Angel & Co., Inc., Minnesota, London, 3 cs.

FILTER PAPER

H. Reeve Angel & Co., Inc., Minnesota, London, 7 cs.
J. Manheimer, Majestic, Southampton, 160 bls.
A. Giese & Son, Majestic, Southampton, 53 bls.

COLORED PAPER

E. Dietzgen & Co., Cleveland, Hamburg, 48 cs.

GLAZED PAPER

Richardson Bros., Laurentic, Liverpool, 4 cs.

NOTE PAPER

H. Reeve Angel & Co., Inc., Minnesota, London, 1 cs.

WRITING PAPER

Guibout freres, Paris, Havre, 6 cs.
Japan Paper Co., Paris, Havre, 6 cs.
C. A. Redden, Mauretania, Southampton, 1 cs.
Abraham & Strauss, Mauretania, Southampton, 1 cs.
B. Altman & Co., Mauretania, Southampton, 1 cs.
D. C. Andrews & Co., Mauretania, Southampton, 4 cs.
The Eleto Co., Mauretania, Southampton, 2 cs.

STRAW PAPER

Bank of The United States, Cleveland, Hamburg, 290 rolls.

MISCELLANEOUS PAPER

Guaranty Trust Co., Cleveland, Hamburg, 201 bls.
Kolesch & Co., West Arrow, Rotterdam, 7 cs.
P. J. Schweitzer, Paris, Havre, 9 cs.
Portenoy, Inc., Paris, Havre, 2 cs.
Kadri Bros., Paris, Havre, 6 cs.
Japan Paper Co., Paris, Havre, 16 cs.
G. Lueders, Paris, Havre, 2 cs.
Bordens Farm Products Co., Paris, Havre, 12 cs.
Keller Dorian Paper Co., Paris, Havre, 15 cs.
F. J. Emmerich, Paris, Havre, 2 cs.
Japan Paper Co., Mauretania, Southampton, 2 cs.

RAGS, BAGGINGS, ETC.

Bulkley, Dunton & Co., Anaconda, ——, 71 bls. rags.
E. J. Keller Co., Inc., Anaconda, Rotterdam, 65 bls. bagging.
E. J. Keller Co., Inc., Anaconda, Rotterdam, 74 bls. rags.
E. J. Keller Co., Inc., Anaconda, Rotterdam, 29 bls. thread waste.
Darmstadt, Scott & Courtney, Segundo, Buenos Aires, 63 bls. rags.
Equitable Trust Co., Aurania, Liverpool, 17 bls. rags.
A. W. Fenton, Inc., Laurentic, Liverpool, 11 bls. rags.
E. A. Stone & Co., Laurentic, Liverpool, 6 bls. rags.
B. D. Kaplan, Laurentic, Liverpool, 201 bls. rags.
Brown Bros. & Co., Laconia, Liverpool, 6 bls. rags.
T. D. Downing & Co., London Exchange, London, 134 bls. rags.
P. Colale, Carenco, Genoa, 155 bls. bagging.
C. B. Richard & Co., City of St. Joseph, Leghorn, 347 bls. rags.
State Bank, Montevideo, Barcelona, 111 bls. rags.
S. Birkenstein & Son, Montevideo, Barcelona, 257 bls. rags.
E. J. Keller Co., Inc., Cleveland, Hamburg, 72 bls. bagging.
Castle & Overton, Inc., Caucasier, Antwerp, 65 bls. rags.
Castle & Overton, Inc., Hellen, France, 243 bls. rags.
Castle & Overton, Inc., Hellig Olav, Denmark, 68 bls. bagging.

OLD ROPE

E. J. Keller Co., Inc., Anaconda, Rotterdam, 61 bls.
Castle & Overton, Inc., London Exchange, London, 43 bls.
Brown Bros. & Co., Montevideo, Coruna, 46 bls.

CASEIN

National City Bank, A. Legion, Buenos Aires, 417 bags.

WOOD PULP

Parsons & Whittemore, Inc., Cleveland, Hamburg, 260 bls. wood pulp, 52 tons.
Castle & Overton, Inc., Anaconda, Rotterdam, 199 bls. wood pulp.
J. Anderson & Co., Columbia, Trieste, 426 bls. wood pulp.
M. Gottesman & Co., Inc., Columbia, Sebenico, 2,400 bls. wood pulp.
Atterbury Bros., Inc., Hellig Olav, Oslo, 500 bls. wood pulp.
Phila. Girard National Bank, Hellig Olav, Oslo, 400 bls. wood pulp.
Perkins, Goodwin & Co., Bergensfjord, Oslo, 375 bls. sulphite, 76 tons.
Perkins, Goodwin & Co., Bergensfjord, Oslo, 300 bls. wood pulp, 50 tons.
Atterbury Bros., Inc., Bergensfjord, Oslo, 750 bls. wood pulp, 152 tons.
Chemical National Bank, Bergensfjord, Oslo, 980 bls. sulphite, 127 tons.
J. Anderson & Co., M. Jensen, Hernosand, 300 bls. sulphate, 60 tons.
J. Anderson & Co., M. Jensen, Stugsund, 500 bls. sulphite, 100 tons.
Price & Pierce, Ltd., M. Jensen, Stugsund, 450 bls. sulphite, 75 tons.
Bulkley, Dunton & Co., M. Jensen, ——, 1,850 bls. wood pulp, 370 tons.
E. J. Keller Co., Inc., Ryndam, Karlsruhe, 375 bls. wood pulp.
Bulkley, Dunton & Co., C. Corfitzon, ——, 625 bls. wood pulp.

WOOD FLOUR

H. J. Baker & Bros., Anaconda, Rotterdam, 1,000 bls.
H. J. Baker & Bros., West Arrow, Rotterdam, 602 bags.

NEW ORLEANS IMPORTS

WEEK ENDING NOVEMBER 26, 1927

E. J. Keller Co., Inc., Gand, Antwerp, 174 bls. rags.
E. J. Keller Co., Inc., Gand, Bordeaux, 84 bls. rags.

PHILADELPHIA IMPORTS

WEEK ENDING NOVEMBER 26, 1927

Castle & Overton, Inc., Anaconda, Rotterdam, 900 bls. wood pulp.
E. A. Stone & Co., Anaconda, Rotterdam, 133 bls. rags.
Green, Hamilton & Co., Anaconda, Rotterdam, 56 bls. thread waste.
A. Murphy & Co., London Exchange, London, 4 cs. writing paper.
G. M. Graves Co., London Exchange, London, 104 bls. rags.
Paper Service Co., London Exchange, London, 1 cs. fancy paper.
E. Butterworth & Co., Inc., Carenco, Leghorn, 156 bls. rags.
Phila. Girard National Bank, Carenco, Marseilles, 179 bls. rags.
Castle & Overton, Inc., C. of Eureka, Smyrna, 776 bls. rags.
Chase National Bank, C. of Eureka, Algiers, 260 bls. rags.
Union National Bank, C. of Eureka, Algiers, 140 bls. rags.
Union National Bank, C. of Eureka, Algiers, 73 bls. old rope.
Robert Blank, Caracoli, Havre, 209 bls. rags.
Robert Blank, Saugus, Leghorn, 100 bls. rags.
E. J. Keller Co., Inc., Caracoli, Havre, 281 bls. rags.
E. J. Keller Co., Inc., Seydlitz, Berlin, 57 bls. rags.
E. J. Keller Co., Inc., S. Dollar, ——, 100 bls. rags.
Castle & Overton, Inc., Schwingen, Germany, 31 bls. rags.
Castle & Overton, Inc., Hellen, Spain, 64 bls. rags.
Castle & Overton, Inc., Ninian, Antwerp, 1,033 bls. rags.
Castle & Overton, Inc., Urla, Belgium, 484 bls. rags.
Castle & Overton, Inc., MacKeesport, France, 248 bls. rags.
Bulkley, Dunton & Co., Hannover, ——, 101 bls. rags.

BALTIMORE IMPORTS

WEEK ENDING NOVEMBER 26, 1927

National City Bank, Carenco, Marseilles, 323 bls. rags.
Woodpulp Service Corp., Carlsholm, Gothenburg, 125 bls. sulphite.
Parsons & Whittemore, Inc., Luebeck, ——, 1,350 bls. wood pulp.
Parsons & Whittemore, Inc., Luebeck, ——, 135 bls. wood pulp.
Parsons & Whittemore, Inc., Luebeck, ——, 1,328 bls. wood pulp.
E. J. Keller Co., Inc., Boschdyk, Karlsruhe, 600 bls. wood pulp.

(*Continued on page 64*)

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Broadway and Fifth Avenue,
at Madison Square, New York
"More than an office building"

Imports of Paper and Paper Stock

(Continued from page 62)

PORTLAND IMPORTS

WEEK ENDING NOVEMBER 26, 1927

Pagel, Horton & Co., Inc., M. Jensen, Skutskar, 4,000 bls. wood pulp, 508 tons.

J. Anderson & Co., M. Jensen, Hernosand, 7,800 bls. sulphate, 1,360 tons.

J. Anderson & Co., M. Jensen, Stugsund, 4,575 bls. sulphate, 915 tons.

Bulkley, Dunton & Co., M. Jensen, ——, 3,225 bls. wood pulp, 645 tons.

Bulkley, Dunton & Co., Natirar, ——, 6,096 bls. wood pulp.

BOSTON IMPORTS

WEEK ENDING NOVEMBER 26, 1927

M. Gottesman & Co., Inc., Columbia, Sebenico, 2,400 bls. wood pulp.

Parsons & Whittemore, Inc., West Campgaw, ——, 260 bls. wood pulp.

Parsons & Whittemore, Inc., West Campgaw, ——, 270 bls. wood pulp.

Parsons & Whittemore, Inc., West Campgaw, ——, 175 bls. wood pulp.

Parsons & Whittemore, Inc., West Campgaw, ——, 270 bls. wood pulp.

Parsons & Whittemore, Inc., West Campgaw, ——, 525 bls. wood pulp.

Bulkley, Dunton & Co., West Campgaw, ——, 375 bls. wood pulp.

Bulkley, Dunton & Co., Boschdyk, ——, 135 bls. wood pulp.

Castle & Overton, Inc., Norwegian, England, 80 bls. waste paper.

E. J. Keller Co., Inc., Novian, Manchester, 136 bls. bagging.

Robert Blank, Ryufuku Maru, Naples, 162 bls. rags.

QUEBEC IMPORTS

WEEK ENDING NOVEMBER 26, 1927

Robert Blank, Cairntorr, Leith, 194 bls. rags.

Official Paper Testing Methods Adopted

WASHINGTON, D. C., November 26, 1927.—In cooperation with the Technical Association of the Pulp and Paper Industry, numerous official paper-testing methods were adopted the past year, says Dr. G. K. Burgess, director of the Bureau of Standards in his annual report, speaking of the work done last year by the paper section of the Bureau. In this connection he says further:

"A member of the bureau's staff acted as chairman of the association's paper-testing committee which conducts the development work. Twenty-one methods have been completed and officially adopted by the association.

"Successful results were obtained in paper-making tests of various fibrous raw materials. It was found by semi commercial experiments that paper equal to that made from high-grade rags could be produced from the Caroá plant, native of Brazil. Tests of waste mail pouches made for the General Supply Committee demonstrated their excellent paper-making value and resulted in disposal of them to paper makers at an increased annual profit of $17,000. A good grade of wrapping paper was produced from waste fibrous material, which is a by-product of the manufacture of manila rope, at the Boston Navy Yard. This opens up the possibility of profitable disposal of it to paper makers.

"Treasury Department statistics show that the cooperative research with the Bureau of Efficiency and the Bureau of Engraving and Printing on improving the quality of United States paper currency has increased its average life to ten months as compared with the former figure of seven months. The importance of this work is evident when it is remembered that the cost of producing a year's supply of paper currency is around $10,000,000. One of the chief contributing factors to the greater wearing quality of the present paper currency is the development in the experimental paper mill of a distinctly new type of paper characterized by great fiber strength."

Paper Mills Engage Lubricating Engineer

KALAMAZOO, Mich., November 25, 1927.—An innovation in local paper mill circles and mill operation is the appearance of a lubricating engineer. The official in question is C. E. Barry, one time connected with the Kalamazoo Vegetable Parchment. He has been engaged in his present capacity to work jointly for the Allied Paper Mills, Bryant Paper Company and Western Board and Paper Company to determine lubricating costs for those concerns.

"Lubrication is an important item with all paper mills" said Mr. Barry, "just as it is with any industrial concern that operates heavy batteries of machinery. A concern like the Bryant or Allied will spend $15,000 annually just for oil required. That amount is sufficient to warrant close observation and if possible to institue reforms that will effect savings, at the same time maintaining lubrication at a high state of efficiency. My duty is to keep a check on the oil used by the concerns mentioned, both as to quantity and quality."

Trade Mark Departments

CONDUCTED BY NATIONAL TRADE-MARK CO., WASHINGTON, D. C.

The following are trade mark applications pertinent to the paper field pending in the United States Patent Office, which have been passed for publication to its readers, PAPER TRADE JOURNAL gladly offers to them an advance search and are in line for early registration unless opposition is filed promptly. For further information address National Trade Mark Company, Barrister Bldg., Washington, D. C., trade-mark specialists. As an additional service feature free of charge on any mark they may contemplate adopting or registering.

PAD-O-WAX—No. 246,765. Nashua Gummed and Coated Paper Company, Nashua, N. H. For moistureproof paper sheets.

REPRESENTATION OF THE PROFILE OF AN INDIAN'S HEAD—No. 253,659. The Portland Cordage Company, Portland, Ore. For twine and cordage.

BLUE CAP—No. 255,004. Hawley Pulp and Paper Company, Oregon City, Ore. For wrapping paper.

SAVELOPE—No. 255,699. Harvey Conover, Chicago, Ill. For pay envelopes.

PENIMAID—No. 254,818. J. C. Penney Company, Wilmington, Del. For writing paper, note paper, and envelopes for said paper.

SHOWCARDER—No. 245,757. Showcarder, Inc., St. Paul, Minn. For stenciling outfit.

NATIONAL FOOD BROKERS ASSOCIATION with picture of a scales on which is written the words "SELLER" and "BUYER"—No. 209,541. National Food Brokers Association, Indianapolis, Ind. For letterheads, bill heads, bill forms, and blank sheets.

ROYCROFT—No. 234,318. The Roycrofters, East Aurora, N. Y. For holders for stationery; appointment sets; desk sets; blotters, pen trays, inkpots, etc.

THE KNOCK-OUT PUNCH—No. 237,903. The Globe-Wernicke Company, Norwood, Ohio. For hand punches.

REPRESENTATION OF A PAPER BOY WITH NEWSPAPERS UNDER HIS ARM—No. 244,969. The American News Company, Inc., New York City. For letter slips, paper clips, drawing paper, typewriter paper, toilet paper, tissue papers, fountain pens, pencils, cardboard, waxed paper, rubber bands, etc.

A BLUE RECTANGULAR FIGURE WITH A WEDGE-SHAPED FIGURE CUT THEREFROM—No. 245,241. The American News Company, Inc., New York City. For same as above.

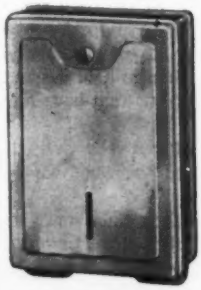
ROPTEX—No. 248,454. United States Envelope Company, Springfield, Mass. For mailing envelopes.

AIRGRAM—No. 253,054. Walter T. Varney, San Francisco, Cal. For a combined letterhead and envelope.

Fire Damages Paper Box Plant

[FROM OUR REGULAR CORRESPONDENT]

DENVER, Colo., November 19, 1927.—A fire in the plant of the Deline Paper Box Manufacturing Company, 1079 Santa Fe Drive, starting in the basement, about 6 o'clock in the morning, November 14, destroyed the building, all stock, and apparently ruined most of the machinery. Origin unknown, the night watchman claiming that he made his rounds shortly before the fire started and everything was normal.



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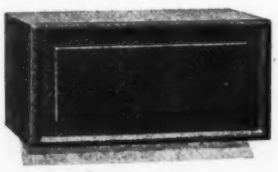
Sixth and Chestnut Sts., Philadelphia, Pa.



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Stamping Division
NORTHERN CORRUGATING CO.
Green Bay, Wisconsin

Stick To the Point, Mr. Barnjum

HALIFAX, Nova Scotia, November 21, 1927.

Editor, PAPER TRADE JOURNAL—

A few days ago there appeared in this paper a letter of mine in which I showed the unreliability of Mr. Frank J. D. Barnjum's prophecies, and as a concrete example, quoted a prediction made by him in 1923 that within two years pulpwood would sell at $24 a cord. I, then, pointed out that at the termination of that period pulpwood sold at $12.21 a cord.

To this Mr. Barnjum makes an artless rejoinder to the effect that pulpwood should have sold at $24 a cord within the specified time, and the reason why it did not do so was because there were certain things wrong with the pulpwood market—not with Mr. Barnjum's prophecy!

The utter childishness of such a reply is too obvious for comment, I shall let that phase of it pass, but what I strongly object to is that Mr. Barnjum did not "stick to the point."

The only points at issue were:

1. Did Mr. Barnjum in 1923 predict that within a period of 2 years pulpwood would sell at $24 a cord?

He did, in a letter to the *Halifax Chronicle* on November 6, 1923, and quoted in my letter.

2. Did pulpwood actually sell for $24 a cord during that period?

It did not, the average price of pulpwood since 1923 has been between $12 and $13 a cord. (As shown by official Government Statistics.)

The question was not, "Why pulpwood did not sell at $24 a cord," but "Did it sell at $24 a cord?"

The fact that it did not do so conclusively proves that Mr. Barnjum's prophecy was most unreliable.

I used this example in order to show what dependence could be placed in Mr. Barnjum's predictions and warnings in general, particularly those of the present time, many of which, if acted upon, will unmistakably lead a country or province to disastrous consequences when it will be small comfort to have Mr. Barnjum explain the reason why his prophecies and warnings did not work out.

The prime reason Mr. Barnjum gives to explain why pulpwood did not sell at $24 a cord is, moreover, utterly misleading. He claims that the paper mills, in order to hold down the price of pulpwood, are cutting wood on their own limits at great expense to themselves, some at a cost of $27 a cord, and that if they bought their wood in the open market its price would soon soar to $24 or more.

Will Mr. Barnjum name any mills that are actually cutting wood at a cost of $27 a cord—and their location?

For, if there is any mill that wood is costing $27 a cord, it will be found upon examination that this cost is due to its disadvantageous location, and at such a mill wood is, possibly, worth $27 a cord. In other words, that mill is situated so far away from the source of production of pulpwood that for it to buy wood in the open market at the current market price of $12 or $13 a cord and transport it to its doors would cost $27 a cord or more.

Such a mill and such a cost would be an isolated exception and would have no particular effect upon the market price of wood. Neither this hypothetical mill nor any other selling news print at $65 a ton could possibly pay $24 a cord for wood—to the cost of which must still be added the further charges of transportation and handling. Long before open market wood went anywhere near that price the mills would stop buying it altogether and buy pulp from Scandinavia.

The idea that the farmers and pulpwood producers could, by a co-operative combination, control the price of pulpwood has, naturally, no greater appeal to anyone than to this Association, in which are enrolled more than 15,000 of the pulpwood producers of Canada. In view, however, of conditions in the industry—of which we have a somewhat intimate and practical knowledge—we are forced to believe that control of the price of pulpwood by such procedure is utterly impossible.

Here is the situation: On the one hand are farmers and small producers, controlling less than 15 per cent of the total standing pulpwood in the Dominion, who find it more profitable to sell their wood in small quantities, year by year, at prices which yield them a fair return for labor and stumpage than to hold it standing and speculate on the uncertainties of predictions that have proved as inaccurate as those of Mr. Barnjum.

In other words, the pulpwood producers, taken collectively, have not control of a large enough percentage of the wood supply to control its price.

On the other hand, are the mills with their vast limits from which they can always draw if the open market price is more than they want to pay; limits, which according to the reiterated statement of the mills, themselves, and the great financial houses selling their securities, contain sufficient wood to supply their full requirements for 30—40—50 years, and in some cases even in perpetuity.

Mr. Barnjum's advice is no more sound than his prophecies, and a country that believes one and takes the other is headed for disaster.

RALPH P. BELL, Vice Pres. and Mgr.,
Canadian Pulpwood Association.

Pulp Wood Prices

Boston, Mass., November 22, 1927.

Editor, PAPER TRADE JOURNAL—

In reply to a letter by Mr. Ralph P. Bell regarding pulp wood prices, which recently appeared in the press, no one knows better than Mr. Bell just why pulp wood is not selling at "$24.00" or more per cord, as it should be today.

It is a well acknowledged fact that some two hundred million cords or forty years supply of wood were destroyed in the forests of Canada through the ravages of the bud worm and in the effort made by the landholders to salvage as much of this dead wood as possible the market was kept overstocked with pulp wood for three or four years. The balance of this dead wood is now beyond further salvage.

The only factor that is holding the price of wood down today is the very clever manipulation of the wood situation by representatives of the American paper companies, some of whom are cutting wood on their own holdings in such remote and expensive localities that it is costing them $29.00 or more per cord. It will be asked why they do this, when they can buy wood of the farmers for so much less. The answer is that if they went into the open market for their full requirements the price would soon soar to $24.00 or more per cord. It is only by cutting a large quantity of the higher cost wood on their own holdings that they are able to hold the price of the farmer's wood at its present low figure.

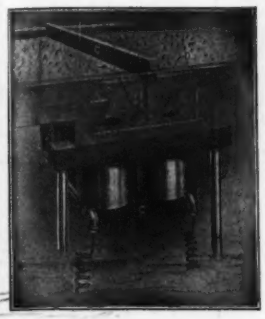
However, a day of reckoning is coming soon. It would be here today if the farmers would combine and sell their wood co-operatively, as the wheat raisers do their wheat. The American paper companies have an association. Why not the farmers?

FRANK J. D. BARNJUM.

Swedish Ground Wood Selling Association Formed

WASHINGTON, D. C., November 23, 1927.—Five large manufacturers of mechanical ground wood recently organized a joint selling company to be known as the Swedish Wood Pulp Company, according to a report from Assistant Trade Commissioner Basil D. Hadl, at Stockholm.

The sales policy of the member mills will be uniform and under the direction of the new company, and it is expected that stabilized prices with benefits to both producers and buyers, will result. While it is possible that production during the immediate future will be curtailed in an effort to improve prices, the association will not be concerned with the production problems of the associated mills. About 450,000 metric tons or approximately two-thirds of Sweden's mechanical ground wood production will be controlled by the new syndicate.



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LOCKWOOD TRADE JOURNAL CO.

10 East 39th St., New York City

New York Market Review

Office of THE PAPER TRADE JOURNAL,
Wednesday, November 30, 1927.

Activities in the local paper market continue normally along routine lines. The various grades are in good request and supplies are moving steadily into consumption. Prices are holding easily to previous levels, with practically no concessions. Sales forces of the leading organizations report a satisfactory volume of business and numerous inquiries in the market for future dealings.

Production of news print is being maintained at a high rate, and the publishers are absorbing the output freely since most of the leading newspapers are increasing the circulation and size of their issues as the busiest shopping season of the year draws near.

The paper board market is showing a strong undertone. The demand for box board and liner board is brisk. Tissues and fine papers are in good request. The coarse paper market continues sound and wrapping paper is still in excellent request. Prices are firm and unchanged.

Mechanical Pulp

Production of ground wood is going forward along seasonal lines with an adequate demand for the output. Contract withdrawals are moving steadily into consumption and manufacturers report a satisfactory volume of inquiries for future business. Prices continue to hold up to schedule.

Chemical Pulp

Trading in the chemical pulp market during the past week has been for the most part routine. Both the domestic and imported product are in fair demand, and a satisfactory volume of inquiries has been reported in the market. Among the various grades, relatively little interest is being shown in unbleached sulphite; on the other hand, kraft pulp is bringing the strongest inquiry, as a result of the imminent closing of Baltic navigation.

Old Rope and Bagging

The old rope market continues steady, and both the imported and domestic grades are in fair request. Gunny Bagging is still quiet, but bleachery burlap and scrap bagging are arousing some interest. Prices are stable.

Rags

The undertone of the local rag market is sound. Cuttings are firm and domestic roofing rags are in increased demand. Importation of old white rags is reported somewhat scarce, as this product is in strong request abroad and is consequently bringing good prices. The schedule recently quoted still holds true.

Waste Paper

Conditions in the paper stock market are stable. The lower grades of waste paper are being freely absorbed by the paper mills. Trading in the higher grades is also brisk. Book stock is moving at a good pace and old kraft is in an especially strong position. Container manila and print manila are moving steadily into consumption. No changes in price have been reported during the past week.

Twine

With the approach of the Christmas shopping season the market for twine is growing increasingly strong. Wrapping paper is in excellent request and the demand for the various grades of twine is keeping pace. Prices remain steady to firm.

Simplified Practice Recommendation Reaffirmed

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 23, 1927.—Simplified Practice Recommendation No. 44, pertaining to Boxboard Thicknesses, has been reaffirmed, through the Standing Committee of the Industry, for another year, effective January 1, 1928, according to officials of the Division of Simplified Practice, United States Department of Commerce. The results of a survey conducted by the Industry indicated 65 per cent adherence to the recommendation.

According to George Gair, of the Robert Gair Company, New York City, a member of the Standing Committee of the Industry, the failure to secure greater adherence to the simplification schedule of boxboard thicknesses, as recommended by the Industry, has been due to the fact that users were not sufficiently acquainted with the program to base their requirements on the thicknesses therein. Mr. Gair advised that some procedure be evolved whereby the trade press may make particular reference to this recommendation, with a view to bringing about the use, by all industries, of the basic sizes and thicknesses when specifying their requirements for individual containers.

The original recommendation for boxboard thicknesses reduced the varieties from 244 to 60, an elimination of 75 per cent.

Vermont Talc Co. Again Making Shipments

CHESTER, Vt., November 26, 1927.—The Vermont Talc Company, of Chester, Vt., were one of the few fortunate concerns in the State of Vermont which did not suffer from the recent catastrophe which visited this State. The only interruption in their business was in the matter of shipments due to the washing out of the Rutland Railroad in their vicinity. This damage has been completely repaired and the Vermont Talc Company are now in a position to again ship their products promptly as heretofore.

Irwin Paper Co.'s Fortieth Anniversary

QUINCY, Ill., November 26, 1927.—The Irwin Paper Company, of this city, is celebrating its fortieth anniversary. Although forty years is a long time, those who started the business are still actively engaged in directing it. Many of the employees of the company have been with the organization for more than a quarter century, and hundreds of customers have been trading with the Irwin Paper Company over long periods of years.

Story Parchment Plant Begins Operations

TRENTON, Mich., November 26, 1927.—The Story Parchment Company, of Trenton, Mich., formerly known as the Story Manufacturing Company, is now manufacturing pure vegetable parchment in all grades. The organization is making an excellent sheet, which is both grease and water proof. The Story Parchment Company announces that it will be its policy to deal through jobbers wherever practical.

E. J. KELLER COMPANY
INCORPORATED
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FOREIGN AND DOMESTIC
PAPER MAKERS' SUPPLIES
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ETTLINGEN MITSCHERLICH UNBLEACHED SULPHITE
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Paper Cutters
Single, Duplex and Diagonal

CUTTER KNIVES PATENT TOP SLITTER

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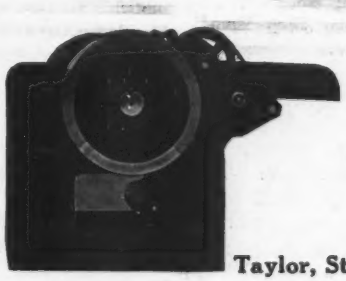
LAWRENCE, MASS.



GIANT
RAG CUTTERS

Taylor, Stiles & Company
Riegelsville, N. J.

Miscellaneous Markets

Office of THE PAPER TRADE JOURNAL,
Wednesday, November 30, 1927.

The condition of the local chemical market continues sound and the various chemicals used in the paper mills are enjoying an active demand. Contract withdrawals are moving into consumption at a steady pace and manufacturers report numerous inquiries for future business. Prices are holding easily up to the schedule quoted last week.

BLANC FIXE.—The blanc fixe market is in a sound position and both the pulp and powder are in good request. Prices continue firm, with spot supplies rather limited. The pulp is quoted at $60 per ton in bulk, and the powder is selling at from 4 cents to 4¼ cents a pound, in barrels, at works.

BLEACHING POWDER.—The undertone of the bleaching powder market is strong. Demand for this product is persistent and contract shipments are moving forward in large volume. Quotations are unchanged. Bleaching powder is offered at from $2 to $2.40 per 100 pounds, in large drums, at works, according to quantity. No change has been made in contract prices for the coming year.

CASEIN.—The casein market is unchanged. Supplies are moving into consumption in satisfactory volume and prices are stable. Domestic casein is quoted at from 17¼ cents to 18½ cents a pound. Imported casein is offered at from 18 to 18¼ cents a pound. All are in bags, car lot quantities.

CAUSTIC SODA.—Business in the caustic soda market continues along routine lines, demand taking care of supply without much accumulation. Prices rule steady to firm. Solid caustic soda is being offered at from $3 to $3.10 per 100 pounds. The flake and the ground are quoted at from $3.40 to $3.50 per 100 pounds, in large drums, at works. Contract prices for the coming year show a slight decline.

CHINA CLAY.—The market for china clay continues normal and both the imported and domestic product are in fair request. Contract withdrawals are moving steadily forward. Prices are unaltered. English china clay is quoted at from $15 to $25 a ton, ship side. Domestic paper makers' clay is selling at from $8 to $9 a ton, in bulk, at mine, and pulverized at from $10 to $12 a ton.

CHLORINE.—No changes have been reported in the chlorine market for some time. The demand is strong and shipments against contract are moving into consumption in heavy volume. Chlorine on contract is selling at 4 cents a pound in tanks, or multi-unit cars, at works. Spot prices remain at from 4¼ cents to 4½ cents a pound. New contract prices recently announced show a decline of one-half cent a pound.

ROSIN.—Activities in the rosin market continue along routine lines. Manufacturers report a larger volume of inquiries in the market. At the naval stores, the grades of gum rosin used in the paper mills are quoted at from $8.40 to $8.50 per 280 pounds gross, in barrels, ex dock. Wood rosin is quoted at $6 per 280 pounds gross, in barrels, at southern shipping points.

SALT CAKE.—Salt cake continues to enjoy a heavy demand. Manufacturers report a large volume of inquiries for future business. Prices remain firm and unaltered. Salt cake is still selling at from $18 to $19 a ton, in bulk, at works. Chrome salt cake is quoted at from $14 to $15 a ton, in bulk, at works.

SODA ASH.—Production of soda ash continues at a brisk rate, with adequate consumption. The market is firm and scheduled prices are being upheld without difficulty. Contract prices on soda ash, in car lots, at works, are still quoted as follows: in bulk, $1.20; in bags, $1.32½; in barrels, $1.57½. Contract prices for 1928 show a slight decline.

STARCH.—There is a consistently heavy demand for those grades of starch used in the paper mills. The price schedule has been the same for some time, and refiners are still offering special paper makers' starch at $3.07 per 100 pounds, in bags, and $3.25 per 100 pounds in barrels, at works.

SULPHATE OF ALUMINA.—The sulphate of alumina market continues active. Large shipments on contract are moving forward into consumption and manufacturers report an excellent demand for this product. Prices rule steady to firm. Prices on commercial grades of sulphate of alumina range from $1.40 to $1.45 per 100 pounds. The iron free is quoted at from $2 to $2.05 per 100 pounds, in bags, at works.

SULPHUR.—Consumption of sulphur continues at a high rate with a heavy volume of inquiries in the market. Prices are holding to the levels maintained for some time. Sulphur is quoted at from $18 to $19 a ton, in bulk, at mine; on spot, at $20 a ton.

TALC.—No marked changes have been reported in the talc market for some time. The demand is persistent, and contract withdrawals are moving regularly into consumption. Prices formerly quoted still hold good: domestic talc is offered at from $16 to $18 a ton, at eastern mines; French talc is selling at from $18 to $22, ship side.

NEWS PRINT PROBLEMS

(*Continued from page 19*)

no plans regarding its future developments. Ultimately, of course, it may be possible to develop the Quebec Pulp and Paper Mills property into a news print producer, but there is no intention of taking such a step at the present time, due to the present situation in the news print market. There has been no betterment of late in the market for ground wood pulp so that earnings of the Quebec Pulp and Paper Mills as compared with its capitalization are still on an unsatisfactory basis.

Eddy Deal Is Rumored

It is rumored here that the E. B. Eddy Company, controlled by R. B. Bennett, the newly-elected leader of the Conservative party in Canada, has been sold to the International Match Corporation, and not, as was expected, to the International Paper Company. The International Match Company is controlled by the Swedish Match Trust, which virtually controls match output throughout the world. The Eddy Company, whose plant is at Hull, Que., manufactures large quantities of matches and other specialties, and it has a capacity of 424,000 pounds of news print and other paper per day. A few days ago the price of matches was advanced $1.25 a case, and this happened, it is understood, after the International Match Corporation secured definite control of the Eddy plant.

Fenimore Mill Shuts Down

[FROM OUR REGULAR CORRESPONDENT]

HUDSON FALLS, N. Y., November 26, 1927.—The sulphite department of the Union Bag and Paper Corporation, operating as the Fenimore Mill, suspended operations permanently recently throwing about 150 hands out of work. It was said that it was doubtful if the plant would be used for any other product although there have been rumors to the effect that a change in product was contemplated. For many years the mill has played an important part in paper making and it is generally hoped that the shutdown will only be of brief duration due to the effect a long curtailment would have on the business prosperity of this place.

New L. L. Brown Agent

ADAMS, Mass., November 21, 1927.—The Whitney Paper Company, of Wichita, Kansas, has been appointed the agent in that territory for Brown's Linen Ledger permanent record paper, manufactured by the L. L. Brown Paper Company, of Adams, Mass.

Clay

300 tons daily

AMERICAN MADE FOR AMERICAN TRADE

AT LAST!!

"An American Coating Clay"

***H. T. Brand Coating Clay*, Highest Grade Filling Clay, being used in some of the largest paper mills in the country. Send for samples and article on *"An American Coating Clay."* Forty-two years experience in American washed clays are back of this product.**

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A saving that will look good to you in '28

Sixty percent. saving monthly in the finishing room is what several mills are realizing in their glue cost. It's because they use "Seal" Brand Silicate for capping rolls. It requires no mixing or heating and its qualities are the same today and every day. "Seal" Brand sets quickly and spreads further. A trial costs you nothing. Write for a test sample now.

Philadelphia Quartz Co.

Silicate Headquarters

Philadelphia

ALPHA FIBRE

Clean and Economical

Alpha takes the place of many grades of rags in the making of fine papers. It maintains your high standards - yet reduces your costs.

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Fidalgo (Pulp) Drying System

(PATENTED)

Utilizing Sargent Dryer

UNITS—20 to 100 tons air dried pulp daily.

STRENGTH—Air drys in shredded form, under low temperature retaining high strength test.

CLEANLINESS—Dried in enclosed insulated chamber not pressed until dry.

ECONOMY—Less steam power and labor required to operate. User saves 33 1/3% at Beater. NO FELT COST.

LOW INVESTMENT—Requires no excavation to install or expensive building construction. Can add to capacity of any existing cylinder dryer, or installed in connection with existing wet machines.

In Combination with Rogers Two Press Wet Machine, Kamyr Wet Press or Utilizing Your Present Wet End

See Our Installations and Ask the Pulp Buyer

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Market Quotations

Quoted by Hepburn & Co., 74 Broadway, N. Y. City, to whom all inquiry for quotations on these or any other Securities is referred.

BONDS	BID	OFFERED
Advance Bag & Paper, 7s 1943	105	107
A. P. W. Pulp & Power, 7s 1945	101	102
American Writing Paper, 6s 1947	80	82
Bastrap Pulp & Paper, 6½s 1940	100	103
British Columbia Pulp & Paper, 6s 1950	85	90*
Beaver Products Corp., 7½s 1942	106	109
Bedford Pulp & Paper, 6½s 1942	98½	None
Brown Paper Co., 1st 5½s 1946	96½	99
Bryant Paper Co., 6s 1942	100½	102
Cape Breton Pulp & Paper, 6s 1932	101	103
Central Paper, 7s 1933	85	None
Central Paper Serial 6, 6½s 1942	89	...
Champion Coated Paper, 6s 1926 to 1932	99	...
Champion Fibre, 8s 1930	100	...
Champion Paper Corp'n, 1st 6s 1945	95	97
Continental Paper Products, 6½s 1943	88	91½
Cornell Wood Prod., 7½s 1937	100	104*
Crown Willamette Paper, 6s 1951	100	102
Donnaconna Paper, 6s 1940	101	102½
Dells Paper & Pulp Serial, 6s 1926-38	*95	...
Eastern Mfg. Co., 7s 1938	89	91
Eddy Paper, 7½s 1931	101	103
Escanaba Paper Serial, 6s 1928	99¾	...
Filer Fibre Serial, 7s 1926-39	95	...
Fort Orange Paper, 7s 1942	99	102
Fox River Paper, 7s 1931	99	...
Gair Company, 5½s 1942	96	99
Gilbert Paper Co., 6½s 1926-29	91	None
Hammermill Paper, 6s 1939	100	103*
Hoberg Paper & Fibre, 7s 1937	94½	96
Itaska Paper & Prairie River Power, J+5½s 1926-38	99	101
Itaska Paper, 1st 6s 1933-38	99	101
Kalamazoo Veg. Parchment, 6s 1938	98	...
Marinette & Menominee, 7½s 1936	100	103
Menasha Printing & Carton, 6½s 1939	99½	...
Monroe Paper Products, 7½s 1932	96	...
Munising Paper, 6s 1927-36	96	100
Nekoosa Edwards, 1st Ref. 6s 1928 to 1942	96	99*
Orono Pulp & Paper, 6s 1943	98	...
Orono Pulp & Paper, 5s 1941	94	...
Oswego Falls Corp., 6s 1941	98	100*
Oxford Paper, 6s 1947	104	...
Paepcke Paper Mills, 7s 1930	99	None
Parsons Pulp & Lumber, 7s 1928	97	...
Parker Young Co., 6½s 1944	96½	98½
Paterson Parchment Paper, 6s 1938	100½	102
Penobscot Chemical Fibre, 6s 1942	98	...
Queens City Paper, 7s 1932	95	100*
Richardson Co., 6s 1938	100	...
River Raisin Paper, 6s 1936	96	...
Spanish River Pulp & Paper, 8s 1941	108	110
Stevens & Thompson Paper, 6s 1942	93	95
St. Anne Paper, 6½s 1946	99	101
St. Croix Paper, 5s 1926-37	95	98*
St. Regis Paper Serial, 6½s 1926-35	99½	101
Tait Paper & Color Industries, 6s 1934	90	95
Taggart Bros. Co., 6s 1944	94	97
Ticonderoga Pulp & Paper, 5s 1930	94	98
Ticonderoga Pulp & Paper, 6s 1940	99	101
Warren (The S. D.) Company, 6s 1945	99	101
Wotab Paper, 6½s 1943	102	...
Westfield River Paper, 7s 1926-43	90	...
Whitaker Paper, 7s 1942	106	108

STOCKS	BID	ASKED
American Box Board, Pfd.	8	10
American Box Board, Com.	8	10
Am. Tissue Mills, 7% Pfd.	90	100
British Columbia P. & P., Pfd.	65	70
Brompton Pulp & Paper, 8% Pfd.	93	98*
Brown Corpn., 7% Pfd.	97	100*
Champion Fibre, 7% Pfd.	105	...
Diem & Wing, 7% Cum. Pfd.	90	...
Donnaconna Paper, Com.	58	...
Donnaconna Paper, Pfd.	100	103
Eastern Mfg. Co., 1st Pfd.	34	37
Great Northern Paper, Com.	70	75
Hammermill Paper, 7% Pfd.	105	110
Hinde & Dauch, Com.	135	...
Hinde & Dauch, Pfd.	100	...
Holyoke Card & Paper	150	None
Marathon Paper Mills, Com.	125	...
Midwest Box Co., Pfd. 8%	97	99
Midwest Box Co., Pfd. 6%	90	92
Louis De Jonge Co., 7% Pfd.	93	96
Oxford Papers, Com.	160	170
Oxford Paper Co., Pfd.	175	...
Penobscot Chemical Fibre, Com.	65	75*
Richardson Co., 7% Pfd.	104	...
Rubberoid Company	74	77
Seaman Container, Class B (par $1)	1	None Off.
Seaman Paper Co.	Wanted	None Off.
St. Croix Paper	150	170
St. Regis Paper Co., 7% Cum. Pfd.	101½	104½
Westfield River Paper Co., 1st Pfd.	Wanted	None Off.
West Virginia Pulp and Paper, Com.	50	55
West Virginia Pulp and Paper, Pfd.	100	103
Whittaker Paper, 7% Cum. Pfd.	98	103

* Nominal.

Paper

(F. o. b. Mill)

Ledgers	11.00	@38.00
Bonds	9.00	@45.00
Writings—		
Extra Superfine	14.00	@32.00
Superfine	14.00	@32.00
Tub sized	10.00	@15.00
Engine Sized	8.00	@11.00
News—		
Rolls, contract	3.25	@ —
Rolls, transient	3.25	@ 3.50
Sheets	3.65	@ 3.85
Side Runs	3.00	@ 3.75
Book, Cased—		
S. & S. C.	6.35	@ 7.75
M. F.	6.25	@ 7.75
Coated and Enamel	8.00	@15.00
Lithograph	8.00	@15.00
Tissues—Per Ream—		
White No. 1	.75	@ 1.00
Anti-Tarnish	1.10	@ 1.90
Colored	1.00	@ 2.00
White No. 2	.75	@ .85
Kraft	.90	@ 1.00
Manila	.75	@ .85
Kraft—		
No. 1 Domestic	6.25	@ 6.50
No. 2 Domestic	5.25	@ 5.50
Southern	4.25	@ 4.50
Imported	6.50	@ 7.00
Manila—		
No. 1 Jute	9.00	@ 9.25
No. 2 Jute	7.75	@ 8.50
No. 1 Wood	4.75	@ 5.25
No. 2 Wood	4.00	@ 4.50
Butchers	3.75	@ 4.25
Fibre Papers—		
No. 1 Fibre	5.00	@ 5.50
No. 2 Fibre	4.75	@ 5.25
Common Bogus	2.75	@ 3.00
Screenings	3.00	@ 3.25
Card Middles	4.00	@ 5.00
Glassine—		
Bleached, basis 25 lbs.	13.00	@16.00
Bleached, basis 20 lbs.	15.00	@16.00

(Delivered New York)

Boards—per ton—		
News	50.00	@52.50
Straw	53.50	@57.50
Chip	47.50	@50.00
Binders' Boards	70.00	@75.00
Sgl. Mla. Ll. Chip	57.50	@60.00
Wood Pulp	80.00	@85.00
Container	67.50	@72.50

Mechanical Pulp

(Ex-Dock)

No. 1 Imported—		
Moist	28.00	@30.00
Dry	32.00	@34.00

(F. o. b. Mill)

No. 1 Domestic	26.00	@30.00
Screenings	15.00	@20.00

Chemical Pulp

(Ex-Dock, Atlantic Ports)

Sulphite (Imported)—		
Bleached	3.40	@ 4.50
Easy Bleaching	2.65	@ 2.80
No. 1 strong unbleached	2.40	@ 2.65
Mitscherlich unbleached	2.55	@ 3.25
No. 2 strong unbleached	2.30	@ 2.40
No. 1 Kraft	2.65	@ 2.75
No. 2 Kraft	2.40	@ 2.50
Sulphate—		
Bleached	3.65	@ 3.85

(F. o. b. Pulp Mill)

Sulphite (Domestic)—		
Bleached	3.20	@ 4.75
Easy Bleaching Sulphite	2.60	@ 2.75
News Sulphite	2.40	@ 2.65
Mitscherlich	3.25	@ 3.70
Kraft (Domestic)	2.60	@ 3.30
Soda Bleached	3.25	@ 3.50
Sulphate Screenings—		
Coarse	.75	@ .85
Refined	1.50	@ 1.85

Domestic Rags

New Rags

(Prices to Mill f. o. b. N. Y.)

Shirt Cuttings—		
New White, No. 1	11.75	@12.25
New White, No. 2	8.00	@ 8.50
Silesias No. 1	7.25	@ 7.75
New Unbleached	10.50	@11.00
Washables	4.25	@ 4.75
Fancy	5.50	@ 6.00
Blue Overall	6.75	@ 7.25
New Blue Prints	5.25	@ 5.50
New Soft Blacks	5.25	@ 5.75
Mixed Khaki Cuttings	4.75	@ 5.25
Pink Corset Cuttings	8.00	@ 8.50
O. D. Khaki Cuttings	5.25	@ 5.75
Men's Corduroy	3.75	@ 4.25
New Mixed Blacks	3.50	@ 3.75

Old Rags

White, No. 1—		
Repacked	5.75	@ 6.50
Miscellaneous	4.75	@ 5.25
White, No. 2—		
Repacked	3.25	@ 3.75
Miscellaneous	2.75	@ 3.00
St. Soiled, White	2.25	@ 2.40
Thirds and Blues—		
Repacked	2.25	@ 2.50
Miscellaneous	1.75	@ 2.00
Black Stockings	3.25	@ 3.75
Roofing Rags—		
Cloth Strippings	1.70	@ 1.80
No. 1	1.70	@ 1.80
No. 2	1.50	@ 1.60
No. 3	1.30	@ 1.40
No. 4	1.25	@ 1.35
No. 5A	.95	@ 1.05

Foreign Rags

New Light Silesias	7.00	@ 7.50
Light Flannelettes	7.75	@ 8.50
Unbleached Cottons	10.00	@11.00
New White Cuttings	10.50	@11.50
New Light Oxfords	7.00	@ 7.50
New Light Prints	5.50	@ 6.50
New Mixed Cuttings	3.00	@ 3.50
New Dark Cuttings	2.75	@ 3.25
No. 1 White Linens	7.25	@ 8.00
No. 2 White Linens	5.50	@ 6.25
No. 3 White Linens	4.50	@ 5.00
No. 4 White Linens	3.00	@ 3.50
Old Extra Light Prints	2.75	@ 3.25
Ord. Light Prints	2.25	@ 2.50
Med. Light Prints	1.90	@ 2.10
Dutch Blue Cottons	2.25	@ 2.50
German Blue Linens	2.50	@ 2.75
German Blue Cottons	2.00	@ 2.25
Checks and Blues	1.75	@ 2.00
Lindsay Garments	1.85	@ 1.95
Dark Cottons	1.65	@ 1.70
Shoppery	1.55	@ 1.60
French Blues	2.25	@ 2.50

Old Rope and Bagging

(Prices to Mill f. o. b. N. Y.)

Gunny No. 1—		
Foreign	1.70	@ 1.80
Domestic	1.80	@ 1.90
Wool Tares, light	1.60	@ 1.70
Wool Tares, heavy	1.60	@ 1.70
Bright Bagging	1.60	@ 1.70
Small Mixed Rope	1.30	@ 1.50
Manila Rope—		
Foreign	3.25	@ 3.65
Domestic	4.00	@ 4.25
New Burlap Cut	2.75	@ 3.00
Hessian Jute Threads—		
Foreign	3.50	@ 4.00
Domestic	3.25	@ 3.50

Old Waste Papers

(F. o. b. New York)

Shavings—		
Hard, White, No. 1	3.40	@ 3.65
Hard, White, No. 2	2.90	@ 3.05
Soft, White, No. 1	2.90	@ 3.10
Flat Stock—		
Stitchless	1.35	@ 1.40
Overissue Mag.	1.30	@ 1.35
Solid Flat Book	1.25	@ 1.30
Crumpled No. 1	.90	@ 1.00
Solid Book Ledger	1.90	@ 2.10
Ledger Stock	1.70	@ 1.75
New B. B. Chips	.65	@ .75
Manilas—		
New Env. Cut	2.40	@ 2.60
New Cuttings	1.60	@ 1.85
Extra No. 1 old	1.25	@ 1.35
Print	.85	@ .95
Container	.70	@ .80
Bogus Wrapper	.75	@ .85
Old Kraft Machine Compressed bales	2.10	@ 2.20
News—		
No. 1 White News	1.75	@ 1.85
Strictly Overissue	.85	@ .90
Strictly Folded	.70	@ .75
No. 1 Mixed Paper	.55	@ .60
Common paper	.35	@ .40

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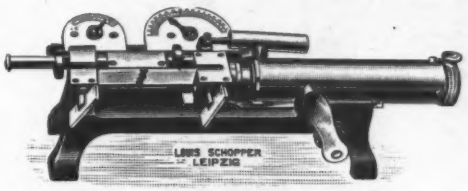

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Twines

(F. o. b. Mill)

Cotton—			
No. 1	.39	@	.40
No. 2	.37	@	.38
No. 3	.36	@	.37
B. C., 18 basis	.38	@	.40
A. B. Italian, 18 basis	.48	@	.53
Finished Jute—			
Dark 18 basis	.24	@	.25
Light 18 basis	.27	@	.28
Jute Wrapping, 3-6 Ply—			
No. 1	.21	@	.23
No. 2	.20	@	.22
Tube Rope—			
4-ply and larger	.18	@	.19
Fine Tube Yarn—			
5-ply and larger	.23	@	.27
4-ply	.24	@	.28
3-ply	.26	@	.30
Unfinished India—			
Basis	.16	@	.17
Paper Makers Twine			
Balls	.13	@	.15
Box Twine, 2-3 ply	.17	@	.19
Jute Rope	.21	@	.23
Ameri. Hemp, 6	.29	@	.31
Sisal Hay Rope—			
No. 1 Basis	.18	@	.20
No. 2 Basis	.16	@	.18
Sisal Lath Yarn—			
No. 1	.16	@	.18
No. 2	.14	@	.16
Manila Rope	.24	@	.26

CHICAGO

All Rag Bond	.35	@	.41
No. 1 Rag Bond	.25	@	.35
No. 2 Rag Bond	.14	@	.25
Water Marked Sulphite Bond	.09	@	.12
Sulphite Bond	.06¾	@	.11
Superfine writing	.18	@	.24
No. 1 fine writing	.14	@	.18
No. 2 fine writing	.12	@	.14
No. 3 fine writing	.08½	@	.12
No. 1 M. F. Book	.06½	@	.07¼
No. 2 M. F. Book	.05¼	@	.06¼
No. 1 S.&S.C. Book	.06¾	@	.07¾
No. 2 S.&S.C. Book	.05¾	@	.06½
Coated Book	.07½	@	.12
Coated Label	.07½	@	.10
News—Roll, mill	.03½	@	.04¼
News—Sheets, mill	.03¾	@	.04¾
No. 1 Manila	.04¼	@	.05¾
No. 1 Fibre	.04¾	@	.05¾
No. 2 Manila	.04¼	@	.04¾
Butcher's Manila	.04	@	.04½
No. 1 Kraft	.05¼	@	.06¼
Southern Kraft	.04½	@	.05
No. 2 Kraft	.05	@	.05¼
Wood Tag Boards	.04¼	@	.06¼
Sulphite Screenings	.03	@	.03¼
Manila Tissue—			
24x36 Sheet	.07	@	.07¾
White Tissue—			
20x30 Sheet	.07¼	@	.07½
Boards, per ton—			
(Delivered Central Territory)			
Plain Chip	45.00	@	—
Solid News	47.50	@	—
Manila Lined Chip	55.00	@	—
Container Lined—			
(Delivered Central Territory)			
85 Test	65.00	@	70.00
100 Test	70.00	@	—

Old Papers

(F. o. b. Chicago)

Shavings—			
No. 1 Hard White	2.80	@	2.90
White Env. Cuttings	3.60	@	3.70
No. 1 Soft Shavings	2.50	@	2.60
No. 1 Mixed	1.00	@	1.05
No. 2 Mixed	.95	@	1.00
Ledger & Writings	1.55	@	1.65
Solid Books	1.20	@	1.30
Blanks	1.75	@	1.80
Krafts	1.90	@	2.05
New Kraft Cuts	2.25	@	2.35
Manila Envelope Cuttings	2.00	@	2.10
Ex. No. 1 Manila	1.55	@	1.65
Print Manila	.90	@	1.00
Folded News (overissue)	.60	@	.70
Old Newspapers—			
No. 1	.65	@	.70
No. 2	.60	@	.65
Mixed Papers—			
No. 1	.70	@	.80
Roofing Stocks—			
(F. o. b. Chicago, net cash)			
No. 1	30.00	@	—
No. 2	28.00	@	—

PHILADELPHIA

Paper

(F. o. b. Mill)

Bonds	.07	@	.40
Ledgers	.11	@	.40
Writings—			
Superfine	.13	@	.18
Extra fine	—	@	.22
Fine	.20	@	.26½
Fine, No. 2	.16	@	.25
Fine, No. 3	.12	@	.20
Book, M. F.	.06¾	@	.0.
Book, S. S. & C.	.06	@	.07½
Book, Coated	.11	@	.16
Coated Lithograph	.09	@	.12
Label	.09	@	.12
News	.03¾	@	.04
No. 1 Jute Manila	.09½	@	—
Manila Sul., No. 1	.04½	@	.06
Manila, No. 2	.04	@	.04½
No. 2 Kraft	.05	@	.05¼
No. 1 Kraft	.06	@	.06¼
Common Bogus	.02¾	@	—
Straw Board	60.00	@	65.00
News Board	47.50	@	50.00
Chip Board	42.50	@	45.00
Wood Pulp Board	4.50	@	5.00
(Carload Lots)			
Binder Boards—			
No. 1, per ton	85.00	@	90.00
No. 2, per ton	70.00	@	75.00
Carload lots	60.00	@	65.00
Tarred Felts—			
Regular	66.00	@	68.00
Slaters	70.00	@	72.00
Best Tarred, 1-ply (per roll)	1.85	@	1.95
Best Tarred, 2-ply (per roll)	1.55	@	1.70
Best Tarred, 3-ply	2.10	@	2.15
No. 1 Mixed Paper	.65	@	.70

Domestic Rags (New)

(Price to Mill, f. o. b. Phila.)

Shirt Cuttings—			
New White, No. 1	.11½	@	.12
New White, No. 2	.07	@	.07½
Light Silesias	.07	@	.07½
Silesias, No. 1	.07½	@	.08
Black Silesia, soft	.05	@	.05½
New Unbleached	.10½	@	.11
Washable	.04	@	.04½
Fancy	.05½	@	.06
Cottons—according to grades—			
Blue Overall	.07½	@	.08
New Blue	—	@	.04
New Black Soft	.05½	@	.06
New Light Seconds	.03	@	.03½
Khaki Cuttings	.04½	@	.05
Corduroy	.03	@	.03¾
New Canvas	.08	@	.09½
New Black Mixed	.05	@	.05½

Bagging

(F. o. b. Phila.)

Gunny, No. 1—			
Foreign	1.75	@	2.00
Domestic	1.75	@	2.00
Manila Rope	3.50	@	4.00
Sisal Rope	1.25	@	2.00
Mixed Rope	1.10	@	1.25
Scrap Burlaps	1.50	@	1.75
Wool Tares, heavy	3.00	@	3.50
Mixed Strings	1.25	@	1.35
No. 1, New Light Burlap	2.50	@	2.75
New Burlap Cuttings	—	@	2.50

Old Papers

(F. o. b. Phila.)

Shavings—			
No. 1 Hard White	3.50	@	3.60
No. 2 Hard White	3.00	@	3.25
No. 1 Soft White	2.75	@	3.00
No. 2 Soft White	1.90	@	2.00
No. 1 Mixed	1.50	@	1.60
No. 2 Mixed	.90	@	1.00
Solid Ledger Stock	1.90	@	2.00
Writing Paper	1.65	@	1.75
No. 1 Books, heavy	1.25	@	1.30
No. 2 Books, light	.85	@	.90
No. 1 New Manila	2.40	@	2.50
No. 1 Old Manila	1.50	@	1.60
Print Manila	1.15	@	1.20
Container Manila	.90	@	1.00
Old Kraft	2.00	@	2.20
Common Paper	.60	@	.65
No. 1 Mixed Paper	.65	@	.80
Straw Board, Chip	.70	@	.80
Binders Board, Chip	.70	@	.80
Overissue News	.80	@	.90
Old Newspaper	.65	@	.70

Domestic Rags (Old)

White, No. 1—			
Repacked	4.50	@	5.25
Miscellaneous	3.50	@	4.00
White, No. 2—			
Repacked	.02¼	@	.02¾
Miscellaneous	.02	@	.02¼
Thirds and Blues—			
Repacked	2.50	@	2.75
Miscellaneous	1.60	@	1.75
Black Stockings	3.50	@	3.75
Roofing Stock—			
No. 1	1.75	@	1.80
No. 2	1.60	@	—
No. 3	—	@	1.35
No. 4	1.10	@	1.20
No. 5A	.90	@	1.00
B	.80	@	.90
C	.80	@	.90

BOSTON

Paper

(F. o. b. Mill)

Ledgers—			
Sulphite	.07½	@	.15
Rag content	.15	@	.30
All rag	.38	@	.52½
Bonds—			
Sulphite	.06½	@	.11½
Rag content	.15	@	.30
All rag	.36½	@	.65
Writings	.07	@	.20
Superfines	.11	@	.31
News	.03½	@	.04
Book, Super	.06	@	.09
Book, M. F.	.05¼	@	.08½
Book, Coated	.08½	@	.20
Coated Litho	.09	@	.12
Label	.09½	@	.15
Jute Manila No. 1	.11	@	.13
Manila, Sul. No. 1	.04¾	@	.06½
Manila, Sul. No. 2	.03¾	@	.04½
No. 1 Kraft	.05½	@	.06½
No. 2 Kraft	.04¼	@	.05½
Common Bogus	.02¼	@	.02¾
Delivered New England points			
Straw Board, rolls	.009		57.50
Straw Board in Sheets, basis 35s to 70s			54.50 @55.00
Filled News Board			50.00
Chip Board			47.50
Single Manila Pulp lined board			55.00 @60.00
Single White, patent coated board bender			75.00 @82.50
Wood Pulp Board			80.00 @85.00
Binder Boards			70.00 @75.00
(F. o. b. Mill)			
Tarred Felts—			
Regular, carload lots			65.00 @ —

Old Papers

(F. o. b. Boston)

Shavings—			
No. 1 Hard White	2.75	@	3.10
No. 2 Hard White	2.60	@	2.90
No. 1 Soft White	2.60	@	—
No. 1 Mixed	1.10	@	1.15
No. 2 Mixed	.85	@	.90
Solid Ledger Stock	1.95	@	2.00
No. 1 Books, Heavy	1.35	@	1.45
No. 1 Books, Light	—	@	1.15
Manila Env. Cuttings	2.00	@	2.25
No. 1 Old Manila	1.40	@	1.60
White Blank News	1.75	@	—
Old Kraft	2.00	@	2.20
Print Manila	.70	@	.80
No. 1 Mixed Paper	.55	@	.62½
Overissue News	.70	@	.80
Old Newspapers	.65	@	—
Box Board, Chip	.65	@	—

Bagging

(Price f. o. b. Boston)

Gunny No. 1—			
Foreign	—	@	1.65
Domestic	1.70	@	1.80
Manila Rope and Strings—			
Foreign	3.50	@	3.75
Domestic	4.00	@	4.12½
Mixed Strings	.90	@	1.00
Scrap Burlaps	1.37½	@	1.50
Wool Tares, heavy	1.65	@	1.75
New Burlap Cutting	2.25	@	2.37½

Domestic Rags (New)

(Price f. o. b. Boston)

Shirt Cuttings—			
New White No. 1	.11½	@	.12½
Silesias, No. 1	.07	@	.07½
New Unbleached	.10	@	.10½
Fancy	.05¾	@	.06
Washable	.04½	@	—
Cottons—Acording to Grades—Blue—			
Blue Overalls	.07½	@	—
New Black, soft	.04	@	.04¼
Khaki Cuttings	.04¾	@	.05¼
Corduroy	.03	@	.03½
New Canvas	.08½	@	.09½

Domestic Rags (Old)

(Price f. o. b. Boston)

Canvas	.04½	@	—
White No. 1—			
Repacked	5.50	@	5.75
Miscellaneous	5.00	@	—
White No. 2—			
Repacked	.04½	@	.05
Miscellaneous	.03½	@	.04
Thirds and Blues—			
Repacked	2.00	@	2.12½
Miscellaneous	1.75	@	1.90
Roofing Stock—			
No. 1	1.60	@	—
No. 2	1.40	@	—
No. 3	1.00	@	—
No. 4	1.00	@	1.10

Foreign Rags

(F. o. b. Boston)

Dark Cottons	1.65	@	—
New No. 1 Shirt Cuttings	11.00	@	11.50
Dutch Blues	2.00	@	—
Lace Curtains	5.25	@	5.50
New Checks & Blues	4.50	@	4.65
Old Fustians	1.80	@	—

TORONTO

Paper

(F. o. b. Mill)

Bond—			
No. 1 Sulphite	.12½	@	—
No. 2 Sulphite	.10¾	@	—
No. 1 Colored	.13½	@	—
No. 2 Colored	.11¼	@	—
Ledgers (sulphite)	—	@	—
Ledgers, No. 1	.36	@	—
Ledgers, No. 2	.27	@	—
Writing	.09½	@	.10
News f. o. b. Mills—			
Rolls (carloads)	3.25	@	—
Sheets (carloads)	3.75	@	—
Sheets (2 tons or over)	4.00	@	—
Book—			
No. 1 M. F. (carloads)	7.75	@	—
No. 2 M. F. (carloads)	7.50	@	—
No. 3 M. F. (carloads)	7.25	@	—
No. 1 S. C. (carloads)	8.25	@	—
No. 2 S. C. (carloads)	8.00	@	—
No. 3 S. C. (carloads)	7.75	@	—
No. 1 Coated and Litho	14.50	@	—
No. 2 Coated and Litho	13.50	@	—
No. 3 Coated and Litho	12.75	@	—
Coated tinted	.15	@	—
Wrapping—			
Rag Brown	4.85	@	—
White Rag	5.25	@	—
"B" Manila	5.65	@	—
No. 1 Manila	6.65	@	—
Fiber	6.65	@	—
Kraft, M. F.	7.20	@	—
M. G.	7.35	@	—

Pulp

(F. o. b. Mill)

Ground wood	25.00	@	28.00
Sulphite easy bleaching	58.00	@	61.00
Sulphite news grade	55.00	@	58.00
Sulphite, bleached	75.00	@	—
Sulphate	65.00	@	—

Old Waste Paper

(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut	3.00	@	—
Soft White Book Shavings	3.00	@	—
White Blk, News	1.50	@	—
Book and Ledger—			
Flat Magazine and Book Stock (old)	1.25	@	—
Light and Crumpled Book Stock	1.10	@	—
Ledgers and Writings	1.50	@	—
Solid Ledgers	1.50	@	—
Manilas—			
New Manila Cut	1.50	@	—
Printed Manilas	1.00	@	—
Kraft	2.25	@	—
News and Scrap—			
Strictly Overissue	.80	@	—
Strictly Folded	.47½	@	.52½
No. 1 Mixed Paper	.60	@	—

Domestic Rags

(Price to mills, f. o. b. Toronto)

No. 1 White Shirt Cuttings	.12	@	.12½
Fancy Shirt Cuttings	.06	@	.06¼

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CAUSTIC SODA
76%—Solid Liquid Flake
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WANT AND FOR SALE ADVERTISEMENTS

HELP WANTED

WANTED—Tour Boss. Must be experienced on board specialties and accustomed to fast running machines. Unless can qualify for this do not apply. Address, Box 27-754, care Paper Trade Journal. D-1

SALESMAN calling on city paper and twine jobbers to sell our Nelson Vertical Paper Cutter as a side line. Commission. L. Hyman & Sons, 35 W. Houston St., New York. D-1

$3,000.00-$30,000.00 men find our Service effective in making connections. Individual. Confidential. Personally planned by JACOB PENN. All mill owners know him, believe in him. Not agency. Jacob Penn, Incorporated, 9 Park Place, New York. tf.

WANTED—An experienced adjuster on a Lockport machine, both flat and square; also on a Potdevin S O S. State experience and salary expected. Steady position for the right man. All communications will be held strictly confidential. Address, Box 27-502, care Paper Trade Journal. tf.

IF YOU are open to overtures for new connection, and qualified for a salary between $2,500 and $25,000, your response to this announcement is invited. The undersigned provides a thoroughly organized service, of recognized standing and reputation, through which preliminaries are negotiated confidentially for positions of the calibre indicated. The procedure is individualized to each client's personal requirements; your identity covered and present position protected. Established seventeen years. Send only name and address for details. R. W. Bixby, Inc., 117 Downtown Building, Buffalo, New York. tf.

SALESMAN for pulp and paper mill machinery wanted. Give full details in first letter. Address, Box 27-738, care Paper Trade Journal tf.

WE ARE looking for a mechanical or chemical engineer between the ages of 26 and 32, who has had experience in paper mill construction, machine design and technical control work. Apply by letter, giving full information concerning age, family status, education, experience, and salary desired. PERSONNEL DIRECTOR, Care Scott Paper Co., Chester, Penna. D-8

WANTED—For Southern Kraft mill—machine tenders, back tenders, and third hands. Give age, experience, reference. Address, Box 27-729, care Paper Trade Journal. D-15

MACHINE TENDER WANTED—Running board machine on high grade test liners and box board. State experience with names of mills, also age. Address, Box 27-732, care Paper Trade Journal. J-12

NIGHT SUPERINTENDENT WANTED for a paper mill in Massachusetts making news and kraft specialties on a cylinder machine. Married man preferred. All communications will be held confidential. Address, Box 27-719, care Paper Trade Journal. D-1

MACHINIST-MILLWRIGHT WANTED—For small paper mill located near Buffalo. Must be familiar with and competent to do all necessary repairs. Advise age, experience, references, and salary expected, in first letter. Address, Box 27-760, care Paper Trade Journal. D-1

SALESMAN—Experienced and commanding trade in wrapping, paper and other grades. Exceptional opportunity for capable man. Sylvester S. Garrett, 259 So. Third St., Philadelphia, Pa. D-15

WANTED—Machine tender; boxboard and container; fast job. Two tour mill. New York State. Address, Box 27-761, care Paper Trade Journal. D-8

COLOR MAN—Experienced on sulphite bonds and ledgers. Must know dyes and be good on matching colors. Give fully your experience and salary desired in first letter. Address, Box 27-766, care Paper Trade Journal. D-15

WANTED—Wet machine tender on binders board and asbestos. One who understands refacing moulds. Day work only. Address, Box 27-755, care Paper Trade Journal. D-1

HELP WANTED

WANTED AT ONCE—Cylinder machine tender experienced on test board; excellent working conditions for steady man; no lost time; references required. Address, Box 27-756, care Paper Trade Journal. D-8

PAPER MILL machinery designer wanted. State experience, salary expected. Address, Box 27-718, care Paper Trade Journal. tf.

WANTED—A technically trained man who is experienced in paper mill operation. Must be alert and active. In applying give references, state experience, age, and salary expected. Address, Box 27-714, care Paper Trade Journal. D-1

BUSINESS OPPORTUNITIES

I AM INTERESTED IN ASSOCIATING WITH SMALL GROWING CONCERN THAT COULD USE ADDITIONAL CAPITAL. HAVE SUCCESSFUL MERCHANDISING EXPERIENCE AND SOME FOLLOWING AMONG PAPER MILLS. ADDRESS, BOX 27-757, CARE PAPER TRADE JOURNAL. D-1

A NATIONAL SALES ORGANIZATIQN, of high credit rating, present capacity about oversold, could handle additional tonnage of various grades Tag Board and Specialties. Would consider financial interest in mill if conditions and product warrant. Address, with full information, Box 27-763, care Paper Trade Journal. D-1

SITUATIONS WANTED

CREDIT MANAGER-BOOKKEEPER: Young man, seven years experience with large paper concern, desires new connection with opportunity for advancement. Address, Box 27-532, care Paper Trade Journal. D-8

SUPERINTENDENT—Trained in the manufacture of tissues, all grades, plain and creped; high grade Kraft papers, converting specialties, crepes, waxing, crepe towels, and Kraft, waxed Kraft. Address, Box 27-563, care Paper Trade Journal. D-8

PRACTICAL PAPER MAKER and mill man desires position. 30 years experience in board mill, 15 years as superintendent on all the better grades of both box and container boards. Has good record for quality and production. Can furnish very best of reference. Address, Box 27-726, care Paper Trade Journal. D-1

FELT SUPERINTENDENT—Ten years with representative mill making dry felt and flooring. Desires change. Capable of getting production and quality. Best references. Address, Box 27-523, care Paper Trade Journal. tf.

ASSISTANT SUPERINTENDENT — College graduate, chemist, nine years practical experience and research in rag fine writing papermaking and specialties, desires position with opportunity for advancement. Address, Box 27-320, care Paper Trade Journal. tf.

Address Replies

to advertisements appearing under Box Numbers in care of

PAPER TRADE JOURNAL
10 East 39th St.,
New York, N. Y.

SITUATIONS WANTED

WANTED—Position as superintendent or foreman of mill making binders, leather and other boards. Middle-aged man. Good at construction and repairs. Address, Box 27-668, care Paper Trade Journal. D-8

POSITION WANTED—Superintendent or foreman; chip board or wrapper mill. Experienced at construction and remodeling. Eastern states preferred. Address, Box 27-669, care Paper Trade Journal. D-8

SUPERINTENDENT—Experienced in all grades of box board, container, liner, test stock, etc. Can produce quality and production. A-1 on repairs and handle help successfully. Will go anywhere. Best of references. Address, Box 27-705, care Paper Trade Journal. D-1

SUPERINTENDENT would like position with mill making tissue, plain, colored, or waxing papers, toilet and toweling papers. Am a hustler, can get results. Good on construction, have had wide experience in starting new mills as well as operating old mills. Address, Box 27-734, care Paper Trade Journal. D-15

FACTORY MANAGER or assistant in paper bag and specialty factory. Experienced in every branch of the business. Address, Box 27-631, care Paper Trade Journal. D-1

POSITION as superintendent or assistant. 17 years experience on all grades of felt roofing; 4 years experience on continuous beater systems. Address, Box 27-735, care Paper Trade Journal. D-15

EXECUTIVE, WITH 15 YEARS EXPERIENCE IN HANDLING SALES OF LARGE WRAPPING PAPER HOUSE, ALSO SOME MILL EXPERIENCE, SEEKS A CHANGE EITHER WITH JOBBER OR MILL. HIGHEST PERSONAL AND BUSINESS REFERENCES CAN BE FURNISHED. ADDRESS, BOX 27-743, CARE PAPER TRADE JOURNAL. D-8

POSITION WANTED as a millwright and general maintenance man on paper mill work. I can also run machine on board or tissue. Address, Box 27-744, care Paper Trade Journal. D-1

POSITION WANTED—Boss beater engineer. Now employed, but would like to make a change. Would accept a position as either boss beater engineer or beater engineer. 15 years experience beating and coloring book, bond, writing, envelope, music, catalog, halftone and all kinds of specialties. Have also sutdied paper making with the I. C. S. Could come at once anywhere in the U. S. A. Address, Box 27-745, care Paper Trade Journal. D-22

COATING FOREMAN, experienced on single and double coaters, expert on metallics, gold, silver, colors, book, glaze, lithograph. Capable of producing coated paper of quality. Can furnish best of references. Address, Box 27-750, care Paper Trade Journal. D-8

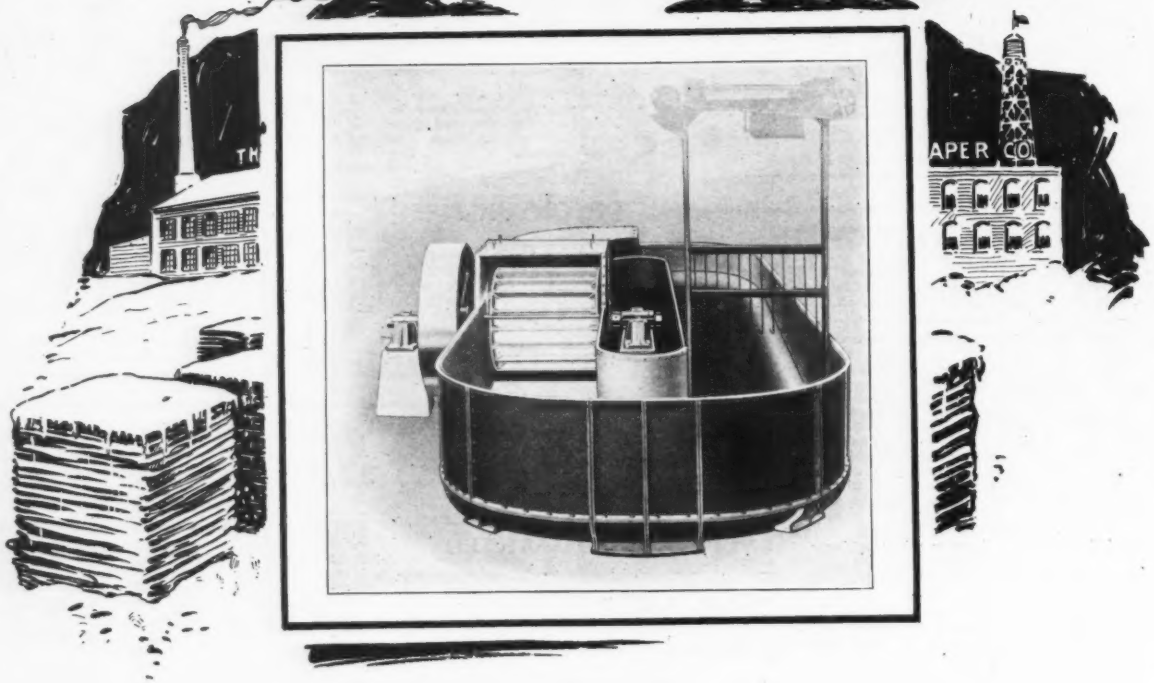
EXPERIENCED working master mechanic wishes a change. 17 years in paper plants; a good draftsman and machinist, able to layout and carry through work and get results. References. Address, Box 27-762, care Paper Trade Journal. D-15

MISCELLANEOUS

ACCOUNTANT AND TAX CONSULTANT, twenty years of thorough experience in the PAPER and ALLIED trades, rendering PERSONAL SERVICE, and at present serving a large number of concerns in the trade throughout several states, is open for part time engagements. My type of service has been of considerable aid to the paper merchant in the conduct and the progress of his business. Unquestionable references furnished. Address, Box 27-765, care Paper Trade Journal. D-29

LIST YOUR WANTS HERE

Frozen Laps



The Shartle Breaker will easily handle frozen laps. It will do away with a shredder and alone reduce your pulp to a satisfactory consistency. You can then pump stock direct to your secondary beaters and keep them operating at full efficiency—at the same time effecting a tremendous saving in labor.

If you are interested in saving from $10,000 to $30,000 a year on labor alone, you are interested in the Shartle Breaker System. 65 of them in use, or on order, and data covering their performance available. Write us.

If you will submit your problems, we will make a layout for you without charge.

Shartle Brothers Machine Company

MIDDLETOWN, OHIO

SHARTLE BROTHERS

DIVISION OF THE BLACK-CLAWSON COMPANY

Shartle **Breakers**

SITUATIONS WANTED

SALESMAN—Position wanted as New York sales man for paper mill by young man with long experience in this market. Address, Box 27-759, care Paper Trade Journal. D-1

BOSS MACHINE TENDER and machine tender. Experienced news print, book and M. G. specialties, Kraft and sulphite, all grades. M/F, S/C, M.G, W/F. Address, Box 27-746, care Paper Trade Journal. D-15

CYLINDER MACHINE TENDER—Good on all kinds of stock; steady and sober. Address, Box 27-747, care Paper Trade Journal. D-15

ROTARY card and paper cutter with several years experience. Can make myself generally useful. Wish permanent position. Unquestionable references. Address, Box 27-748, care Paper Trade Journal. D-1

SUPERINTENDENT desires to make change. Cylinder or Fourdrinier mill making waxings, crepe, napkins and toilet papers. Address, Box 27-749, care Paper Trade Journal. tf.

MISCELLANEOUS

SEND YOUR ODD LOT LIST of coarse and fine papers together with samples to Goldman Paper & Paper Stock Co., 414 So. Front Street, Philadelphia, Pa. tf.

WANTED—Mill ends and job lots in rolls or flats in any quantity, all grades. Also boards. Joseph Goldstein & Sons, 1302-9 N. Halsted Street, Chicago, Illinois. tf.

CLARK MANUFACTURING COMPANY, Holyoke, Mass. Telephone 1828. Builders of cylinder moulds, couch and felt rolls, dandy rolls. We cover dandies and cylinders tight, for fast running machines. 3-5-27

WANTED—Side or odd lot rolls ten to ninety pound basis. The larger the quantity the better we like it. Address, Box 27-481, care Paper Trade Journal. tf.

MILL REPRESENTATIVES — Two capable paper salesmen about to open New York sales office solicit correspondence with paper manufacturers desiring New York representation. Address, Box 27-728, care Paper Trade Journal. D-1

WANTED

WANTED—2 W. & P. Pulpers, 2 Filter Presses and 1 Rogers Wet Machine. Address, Box 27-285, care Paper Trade Journal. tf.

WANTED—Rewinder to handle sheet not less than 50" or more than 72" wide. Address, Box 27-671, care Paper Trade Journal. tf.

WANTED — Envelope Machine — 6¾"—Smith machine preferred; must be in first-class condition. Submit samples of envelopes and state best price. Address, Box 27-736, care Paper Trade Journal. D-8

WE ARE interested in purchasing one sixty-inch wide Waxing machine. Write price and full particulars. Address, Box 27-751, care Paper Trade Journal. D-1

WANTED—Small second-hand Cylinder Mould. The Read Paper Co., Inc., Ithaca, N. Y. D-1

INTERESTED IN Slitter and Rewinder, 44" to 60". Goldman Paper & Paper Stock Co., 414 So. Front Street, Philadelphia, Pa. D-8

FOR SALE

FOR SALE—Second-hand 1200 lb. wood tub N. & W. beater. In good condition. The Noble & Wood Machine Co., Hoosick Falls, N. Y tf

FIVE CALENDER ROLLS—One ten inch and two fifteen inch by hundred six inch face; one eighteen inch, one nineteen inch by one hundred ten inch face. Journals will be trued and face ground to purchasers' specifications by Farrel Foundry & Machine Company, Buffalo, thereby insuring A-1 condition. Address, Lewis F. Houpt, Buffalo. D-1

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For Good Used Machinery

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6—4' x 20' American Process.
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1—W. & P. size 17-200 gals.
Also several smaller sizes.

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6—5' x 22' Allis Chalmers.
7—5' 6" x 22' Schmidt.
1—6' x 22' Gates.

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FOR SALE

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4—Jones Washers. Iron tubs. Rolls 67 x 60. Good shape.
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Several White cedar stuff chests, A-1 shape.
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1—70"—2 cylinder machine.
Several Chippers.
Four deck Beloit frames. These are modern and extra heavy.
One Ryther & Pringle Multiple Saw Slasher. Will cut 32'.
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One No. 2 Lannoye Pulper.
One 61" Holyoke Super-Calender.

The Shartle Brothers Machine Company
Middletown, Ohio tf.

Paper Mill Machine Repair Shop LATHE

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Complete with regular equipment as furnished with NEW LATHE
Your Bulletin is Waiting.

J. J. McCABE LATHE & MACHINERY CORPORATION
149 BROADWAY, NEW YORK

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1—64" super-calender about three years old. Equipped with Cutler-Hammer clutch.

Address, Box 27-472, care Paper Trade Journal.

FOR SALE

2—7 x 16 Shartle Triplex Pumps, in good condition.

Address, Box 27-753, care Paper Trade Journal. tf.

Salesman—Exectuive

To develop and handle sales for Tissue Mill. Must be a constructive result getter. Will have chance to invest substantially in business if successful.

An unusual opportunity for the right man.

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Two Noble & Wood Pulp Breakers; 1200 lbs. capacity
Used only a short time

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Care Paper Trade Journal.

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1—84" Black-Clawson single Cutter.

1—140" Dillon duplex with Moore & White Layboy.

1—72" Hamblet Single Cutter with 24 roll back stand.

1—84" Beloit heavy duty duplex.

1—52" Moore & White Cutter with Moore & White Layboy and Backstands.

1—48" Moore & White Cutter with Moore & White Layboy and Backstands.

1—42" Moore & White Cutter with Moore & White Layboy and Backstands.

1—82" Heavy duty Hamblet Single Cutter with 24 roll Backstands.

2—58" Moore & White Single Cutters.

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The Shartle Brothers Machine Co.,
Middletown, Ohio tf.

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Full details at interview only; to be held either in New York or Philadelphia.

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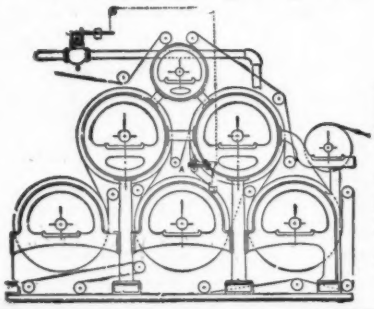

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will do everything we claim for it and more. The test costs you nothing until you are satisfied. Many mills tried one and now have every machine equipped. Write for list of users and other information.

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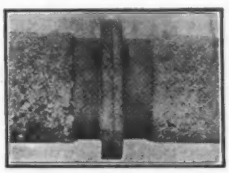

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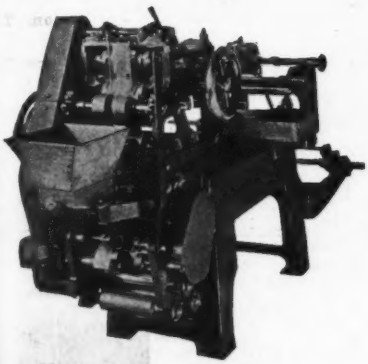

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Blaw-Knox Co., Pittsburgh.

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BLOWERS (Rotary Positive)
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Little, Inc., Arthur D.
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United States Testing Lab.

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Nash Engineering Co., The
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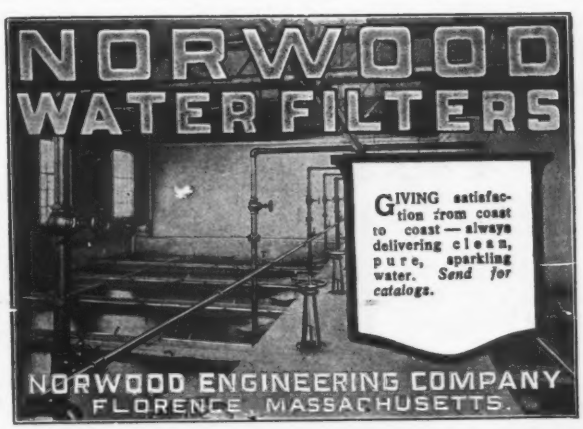
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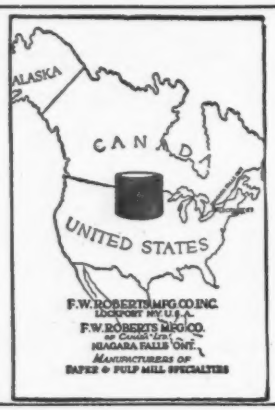

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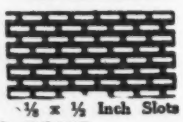

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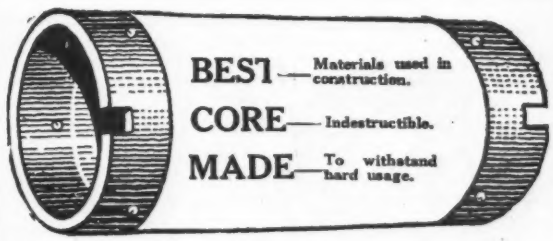

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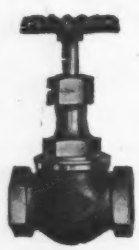

Fig. 106
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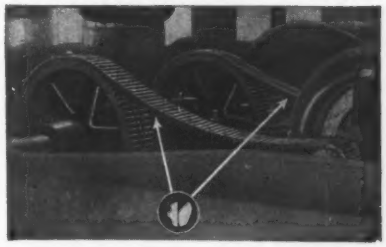

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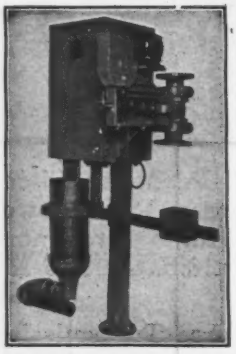

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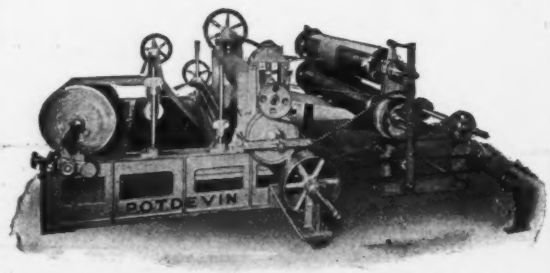

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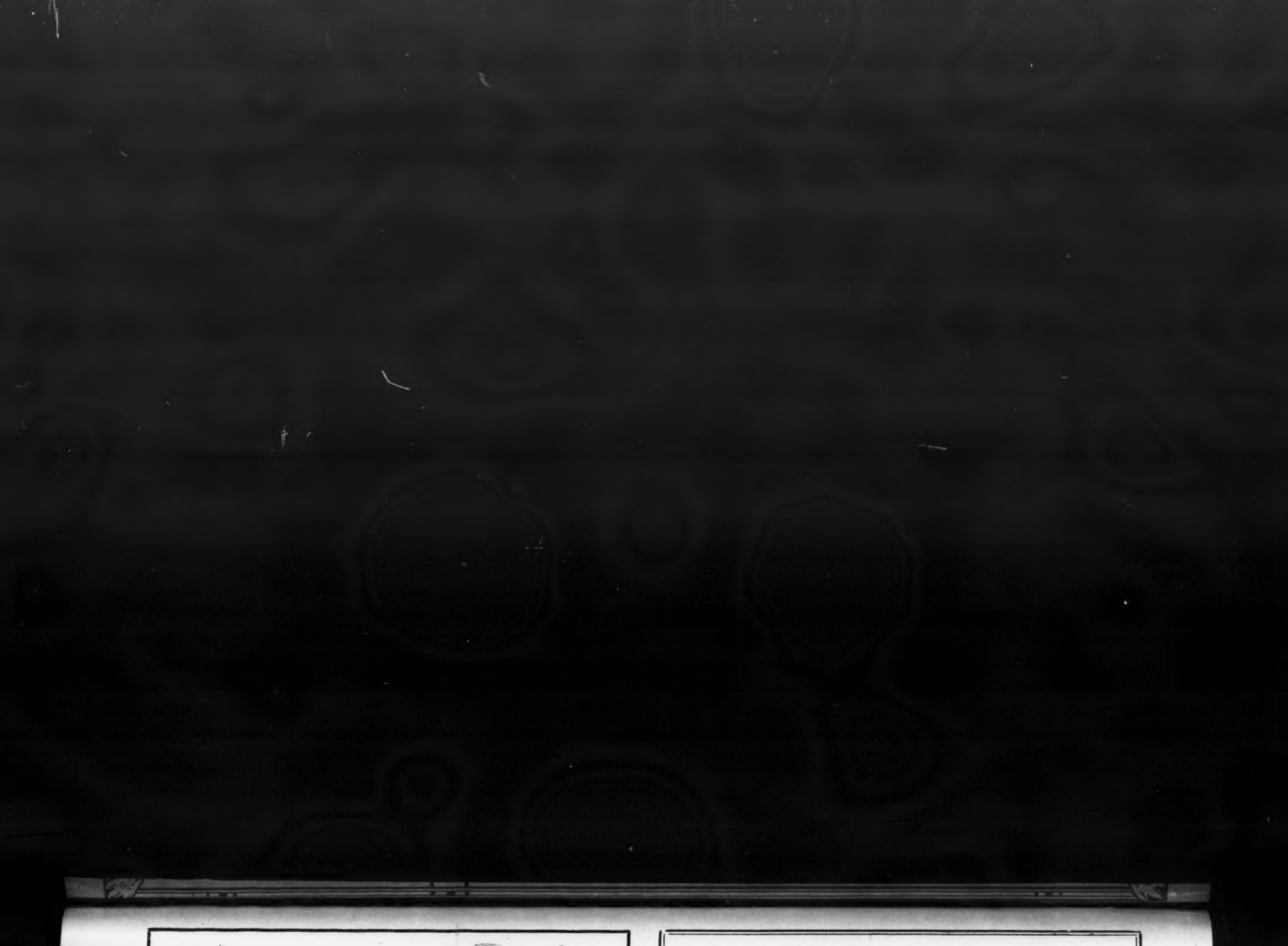
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